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Research Article

Systematic revision of the South American "*Nuncia*" (Opiliones, Laniatores, Triaenonychidae)

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Abstract

The genus *Nuncia* has long been the most speciose within the Opiliones family Triaenonychidae, comprising 63 species and subspecies distributed across New Zealand and South America. Recent molecular studies utilizing Sanger sequencing and ultraconserved elements (UCEs) have indicated that this genus is not monophyletic, and true *Nuncia* are actually confined to New Zealand. Here, the morphology of all South American triaenonychids is re-examined and DNA sequence data compiled from three markers (18S rRNA, 28S rRNA and cytochrome *c* oxidase subunit I) for a large number of triaenonychid species, including specimens from all areas with species currently and formerly classified in *Nuncia* to reassess their phylogenetic position. Based on our findings we 1) revalidate the genus *Chilenuncia* (Muñoz-Cuevas, 1971) **nom. rest.**; 2) describe five new genera: *Fresiax* **gen. nov.**, *Mistralia* **gen. nov.**, *Laftrachia* **gen. nov.**, *Lautaria* **gen. nov.**, *Nerudiella* **gen. nov.**; 3) redescribe five species: *Fresiax spinulosa* **comb. nov.**, *Mistralia verrucosa* **comb. nov.**, *Chilenuncia chilensis* **comb. nov.**, *Chilenuncia rostrata* **comb. nov.**, *Nerudiella americana* **comb. nov.**; and 4) describe 22 new species of South American triaenonychids: *Fresiax conica* **sp. nov.**, *Fresiax fray* **sp. nov.**, *Fresiax mauryi* **sp. nov.**, *Fresiax pichicuy* **sp. nov.**, *Mistralia ramirezi* **sp. nov.**, *Laftrachia robin* **sp. nov.**, *Lautaria ceachei* **sp. nov.**, *Nerudiella cachai* **sp. nov.**, *Nerudiella caramavida* **sp. nov.**, *Nerudiella cautin* **sp. nov.**, *Nerudiella choapa* **sp. nov.**, *Nerudiella curi* **sp. nov.**, *Nerudiella goroi* **sp. nov.**, *Nerudiella jaimei* **sp. nov.**, *Nerudiella malleco* **sp. nov.**, *Nerudiella penco* **sp. nov.**, *Nerudiella pichi* **sp. nov.**, *Nerudiella portai* **sp. nov.**, *Nerudiella quenes* **sp. nov.**, *Nerudiella vilches* **sp. nov.**, *Nerudiella wekufe* **sp. nov.**, and *Nerudiella zapallar* **sp. nov.** Furthermore, we provide detailed illustrations of all the South American species belonging to these lineages formerly classified in *Nuncia*.

Key words: Argentina, Chile, genital morphology, harvestmen, Insidiatores, phylogenetic analysis, systematics, taxonomy

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Introduction

Triaenonychidae Sørensen, 1886, stands as the fourth most diverse family of Opiliones, encompassing 404 known species (Kury et al. 2022). These Laniatores, which are characterized by their small to medium-sized bodies and ranging in color from yellowish to brown (Fig. 1), thrive in the southern temperate

regions of the ancient supercontinent Gondwana (Giribet and Kury 2007). Their presence extends across Australia, Madagascar, New Caledonia, New Zealand, South Africa, and southern South America, with at least one species having dispersed to the Crozet Islands (Enderlein 1909; Roewer 1914; Hickman 1939; Kury 2007; Mendes and Kury 2008; Mendes and Kury 2012; Baker et al. 2020; Porto and Pérez-González 2020; Derkarabetian et al. 2021a). In their natural habitat, triaenonychids are primarily nocturnal, actively navigating the moist temperate forests they inhabit. During daytime, they often seek refuge beneath woody debris, rocks, and even in caves (Pérez-Schultheiss et al. 2021).

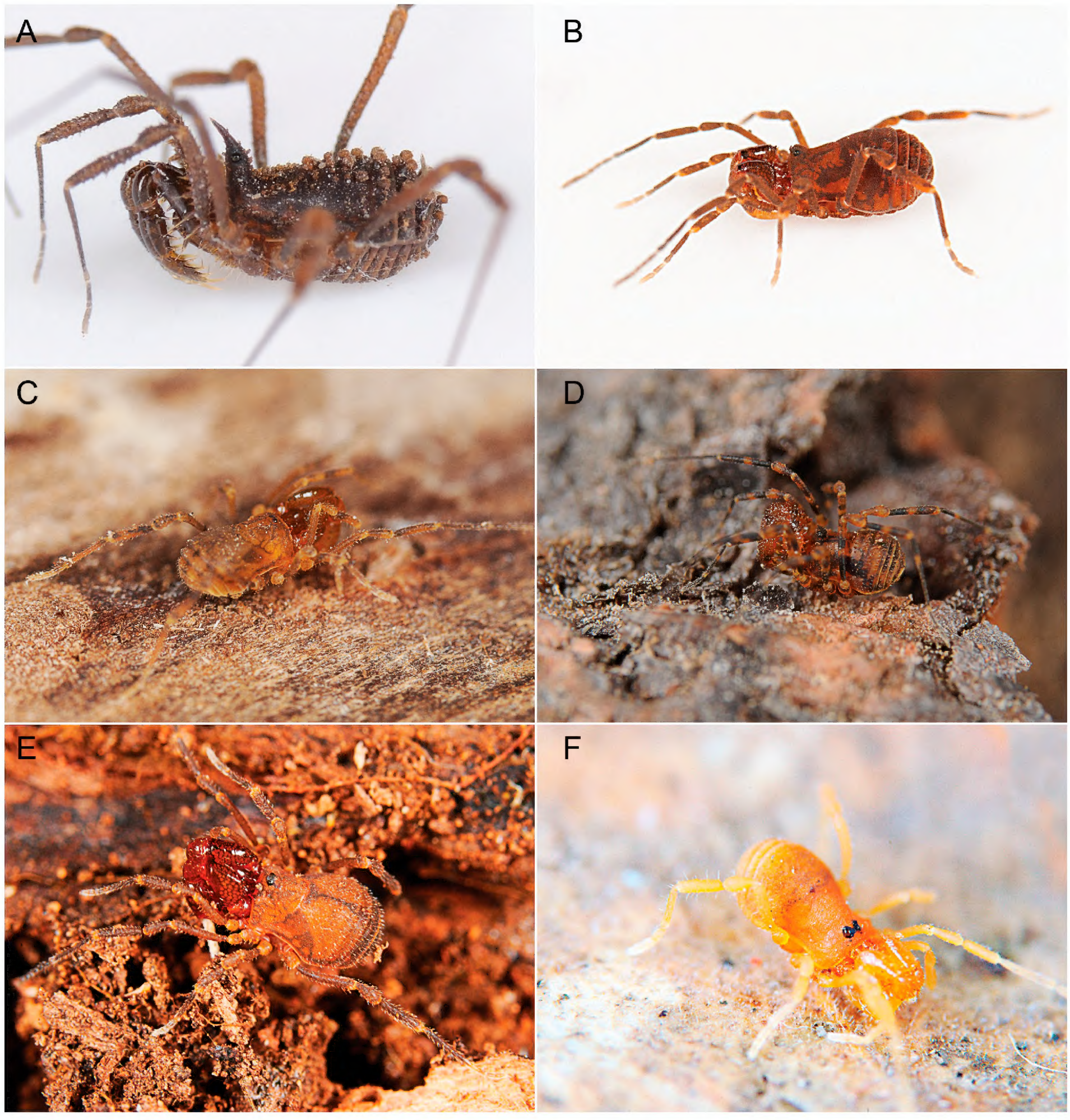

Figure 1. Photographs of live Triaenonychidae **A** *Mistralia verrucosa* comb. nov. **B** *Chilenuncia chilensis* comb. nov. **C** *Nerudiella* gen. nov. **D** *Fresiax spinulosa* comb. nov. **E** *Lautaria ceachei* sp. nov. **F** *Laftrachia robin* sp. nov. Photographs copyright of Abel Pérez-González.

Nuncia, described by Loman in 1902 from New Zealand, is recognized as the most speciose genus within Triaenonychidae, encompassing 63 species and subspecies (Kury et al. 2022). Initially, *Nuncia* was believed to have a distribution that included the Crozet Islands, New Zealand, and South America, a rare transoceanic distribution among triaenonychids (Mendes and Kury 2008). However, recent investigations incorporating molecular and morphological evidence have revealed that *Nuncia* does not form a monophyletic group, the nominal clade being exclusively confined to New Zealand (Porto and Pérez-González 2019; Baker et al. 2020; Derkarabetian et al. 2021a). Here we deal with the remaining *Nuncia*, as the *"Nuncia"* from the Crozet Islands is reinstated in its original genus, *Promecostethus* Enderlein 1909 (Kury et al. 2014; Porto and Pérez-González 2020).

The genus *Nuncia* was established by Loman (1902) for the species *Nuncia sperata* Loman, 1902. Forster (1954) considered it a junior synonym of *Triaenonyx obesus* Simon, 1899, and transferred *T. obesus* to *Nuncia* under the name *Nuncia obesa obesa* (Simon, 1899). Forster (1954) made a significant contribution to the taxonomy of *Nuncia* through his comprehensive revision of the New Zealand Laniatores. His work resulted in the revision and description of 53 new species and subspecies of *Nuncia*. Furthermore, Forster's revision encompassed the reorganization of the infra-generic status of *Nuncia*, resulting in the description of two subgenera (Forster 1954). In the subsequent years (Forster 1965) continued to contribute by documenting additional species of *Nuncia* from New Zealand.

The history of the South American *Nuncia* began when Roewer (1961) described *Nuncia americana*, which marked the first occurrence of a 'transcontinental' genus within Triaenonychidae. Subsequently, Soares (1968) added the Tasmanian *Parattahia* Roewer, 1915, to the list of transcontinental genera with the description of *Parattahia chilensis* Soares, 1968, from Chile. In his influential work, Maury (1990) strengthened and expanded the Roewerian concept of transcontinental *Nuncia* when he described three new species from Chile and Argentina, *N. rostrata*, *N. spinulosa*, and *N. verrucosa*, and also transferred *Parattahia chilensis* to this genus. Maury (1990) not only established the new combination *Nuncia chilensis* but also considered *Chilenuncia donosoi* Muñoz-Cuevas, 1971, its junior synonym; therefore, the hitherto monotypic Chilean genus *Chilenuncia* also fell into the synonymy of *Nuncia*. In the same work, Maury (1990) also reinstated the synonymy of Crozet Island's monotypic *Promecostethus* with *Nuncia*. Since this work, *Nuncia* has been considered the triaenonychid genus with the largest distributional range and a textbook example of transcontinental distribution in opilionid genera.

Recent studies that have examined the relationships within Triaenonychidae worldwide utilizing molecular Sanger markers and ultraconserved element (UCE) data (Baker et al. 2020; Derkarabetian et al. 2021a, 2021b), have confirmed that the South American and New Zealand *Nuncia* represent separate genetic lineages, thus constituting a polyphyletic group. Furthermore, while the New Zealand *Nuncia* are monophyletic, the South American *Nuncia* belong to multiple independent genetic lineages, necessitating taxonomic revision and the proposal of new names that more accurately reflect their systematic classification as was claimed in recent works (Baker et al. 2020; Derkarabetian et al. 2021b).

In this study, our primary focus is on the taxonomy and systematics of the South American triaenonychid species traditionally included in the genus *Nuncia* Loman, 1902, aiming to provide a comprehensive understanding of their phylogeny through molecular analysis and examination of external and genital morphology. Before this study, there were five known species of "*Nuncia*" in South America. Our study has resulted in the redefinition of the Neotropical lineage within this group, as well as the formalization of new taxa. As part of our research, we have revalidated one genus, described five new genera, redescribed the five previously known species, and described 22 additional species. Furthermore, we provide detailed illustrations of all the South American species belonging to these lineages.

Materials and methods

Sample preparation

The specimens used in this study are deposited in the following institutions: American Museum of Natural History (**AMNH**), California Academy of Sciences (**CAS**), Field Museum of Natural History (**FMNH**), Museo Argentino de Ciencias Naturales (**MACN**), Museum of Comparative Zoology (**MCZ**), and Museo Nacional de Historia Natural, Santiago de Chile (**MNHNCL**). Examination and photography of the specimens were conducted using a Leica M205A stereomicroscope equipped with a Leica DF295 digital camera. Specimens were carefully cleaned using a fine bristle paint brush. For scanning electron microscopy (SEM) preparations, body parts were dissected, cleaned, dehydrated using an ethanol series (80%–90%–96%–100%), mounted on aluminum stubs, and coated with gold-palladium using a VG Scientific SC 7620 mini sputter-coater. SEM micrographs were captured under high vacuum using a Philips FEI XL30 TMP at the MACN.

Male genitalia were dissected and temporarily mounted on microscope slides following the technique described in Acosta et al. (2007), with clove oil used as a clearing agent. Examination of male genitalia was conducted using an Olympus BH2 compound microscope, after which they were returned to 80% ethanol and stored in microvials alongside their respective specimens. The morphological nomenclature in this study adheres to the classifications provided by Mendes and Kury (2012), Murphree (1988) Pérez-González and Werneck (2018) and Porto and Pérez-González (2019). Scutum shape outline nomenclature follows the guidelines established by Kury and Medrano (2016). Other details about the external and genital morphology can be analyzed according to the models proposed herein (Fig. 2). All measurements in mm, unless otherwise stated.

Molecular data

We targeted three markers, including two conserved nuclear ribosomal genes (18S and 28S rRNAs) and the mitochondrial gene cytochrome *c* oxidase subunit I. Molecular data were obtained from Baker et al. (2020), with additional sequences obtained from sequence capture of ultraconserved element (UCE) data available from Derkarabetian et al. (2021a) as "bycatch" (Suppl. material 1). For these UCE-derived sequences, we used Geneious v. 11.0 (https://www.geneious.com) to conduct local nucleotide BLAST searches for the associated UCE assembly file for each sample against closely related COI sequences

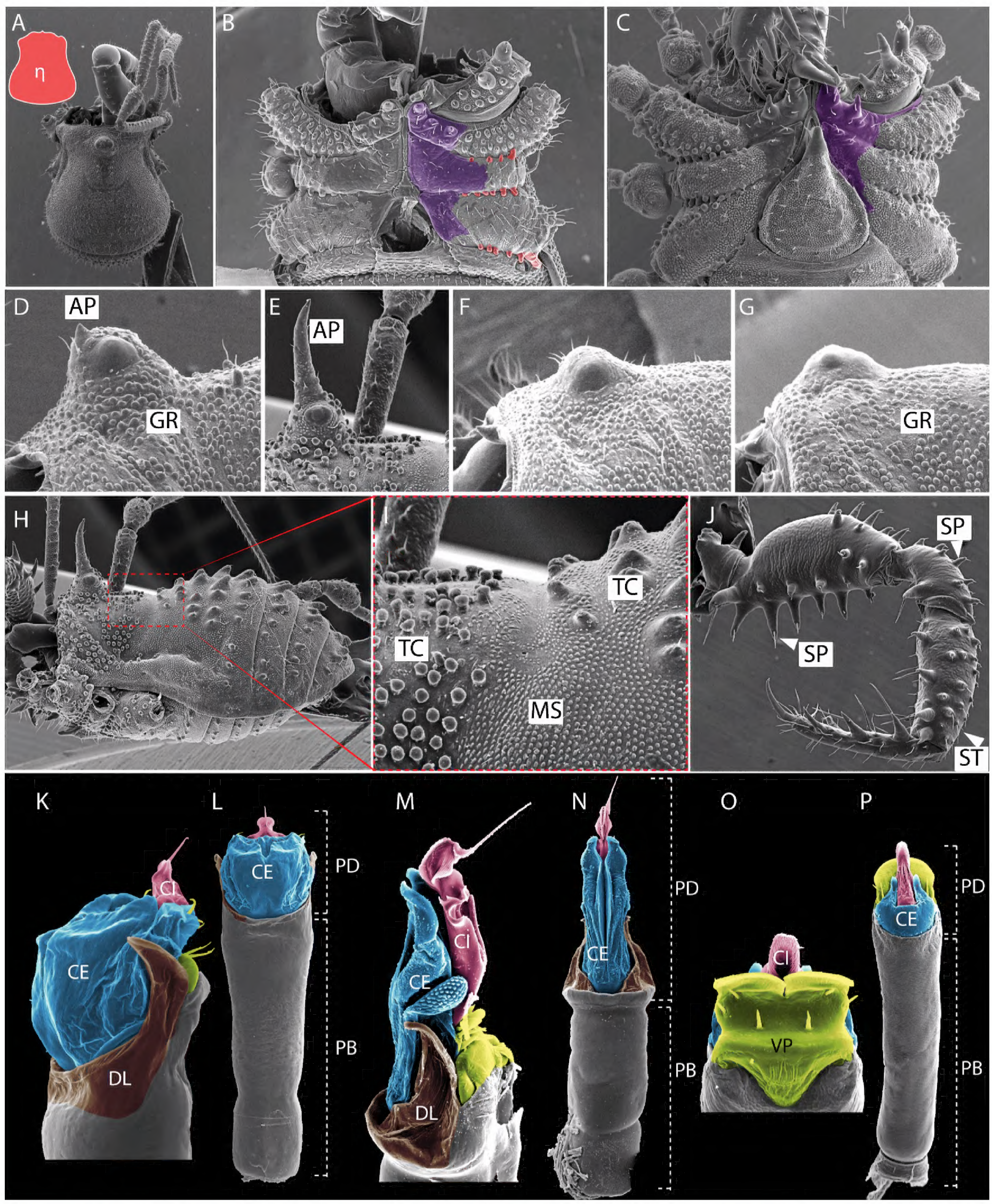

Figure 2. Guide to some taxonomic characters used in this study **A** shape dorsal scutum of Triaenonychidae **B, C** smooth areas of ventral coxae (purple) and ventral bridges(red) **D–G** shapes of ocularium **H, I** styles of integument **J** styles of pedipalps tubercles **K–P** styles of male genital morphology. Abbreviations: AP apophyses, CE capsula externa, CI capsula interna, DL dorsolateral plate,GR granules, MS microgranulation, PB pars basalis, PD pars distalis, SP (spines)large tubercles, ST setae, TC tubercles, VP ventral plate.

which were available from Baker et al. (2020). Sequences for 15 additional taxa were generated for this study from specimens deposited in the MACN collected in 96% ethanol and kept at -20 °C. All voucher specimens for this study are

thus deposited in the MACN or in the MCZ, the latter being available through MCZbase (https://mczbase.mcz.harvard.edu/).

For the new sequences, DNA was extracted from leg muscle using Chelex 10%, with an overnight incubation. 18S rRNA was amplified in two non-overlapping fragments using primer pairs 1F–5R, and 18Sa2.0–9R (Giribet et al. 1996; Whiting et al. 1997). A portion of 28S rRNA was sequenced in two overlapping fragments using primer pairs 28Sa–28Srd5b and 28Srd4.8a–28Srd7bi (Schwendinger and Giribet 2005). COI was amplified with the primer pair LCO1490–HCO2198 (Folmer et al. 1994). PCR reactions were carried out with 0.5–1.5 µL of DNA template, using Taq DNA polymerase in a 25-mL reaction. A 1% agarose gel electrophoresis was used to visualize amplification reactions. Successful reactions were cleaned using ExoSAP. Sanger sequencing was conducted at Macrogen Inc., Korea. New sequences have been deposited in GenBank (Suppl. material 1).

Sequences for each marker were checked and trimmed with Geneious 7.1.3 and aligned with Muscle (Edgar 2004) in MEG. Azevedo-X (Kumar et al. 2018), with the gap opening set at -400.00, 100 maximum iterations, and using UPGMA as clustering method. Aligned fragments were concatenated in Sequence Matrix (Vaidya et al. 2011) and the concatenated dataset was then subjected to subsequent phylogenetic analysis.

Phylogenetic analysis

Model testing and phylogenetic analysis were performed in IQ-TREE (Nguyen et al. 2015), implementing the ModelFinder function (Kalyaanamoorthy et al. 2017) and partitioning by locus (Chernomor et al. 2016). Nodal support was assessed with a Shimodaira–Hasegawa approximate likelihood ratio test (SH-aLRT) and ultrafast bootstrap analysis (UFBoot) (Hoang et al. 2018), specifying 1000 replications for each. The runs were repeated 10 times and three topology tests were conducted: approximately unbiased AU (Shimodaira 2002), bootstrap proportion (Kishino et al. 1990), Kishino–Hasegawa (Kishino and Hasegawa 1989), and expected likelihood weight (Strimmer and Rambaut 2002), using 10,000 resampling-estimated log-likelihoods in IQ-TREE with the 10 trees. A consensus tree summarizing the 10 runs was constructed. This tree served as a reference for the discussion and was further refined and customized using FigTree v. 1.4.3 and Adobe Illustrator 2019. The maps in this study were constructed using shapefiles sourced from Natural Earth data. Additionally, the ecoregions shapefiles were obtained from WWF terrestrial ecoregions (Olson et al. 2001). The map visualization was performed using R Statistical Software (R Core Team 2022) and the following packages: sf (Pebesma 2018, Pebesma and Bivand 2023), ggplot2 (Wickham 2016), ggspatial (Dunnington et al. 2023), and ggpubr (Kassambara 2023).

Results and discussion

Phylogenetics of South American lineages

In our phylogenetic analysis (Fig. 3), we found support for the hypothesis that the previously known South American "*Nuncia*" species are polyphyletic assemblage of taxa, where "*Nuncia*" *spinulosa* and three related new species be-

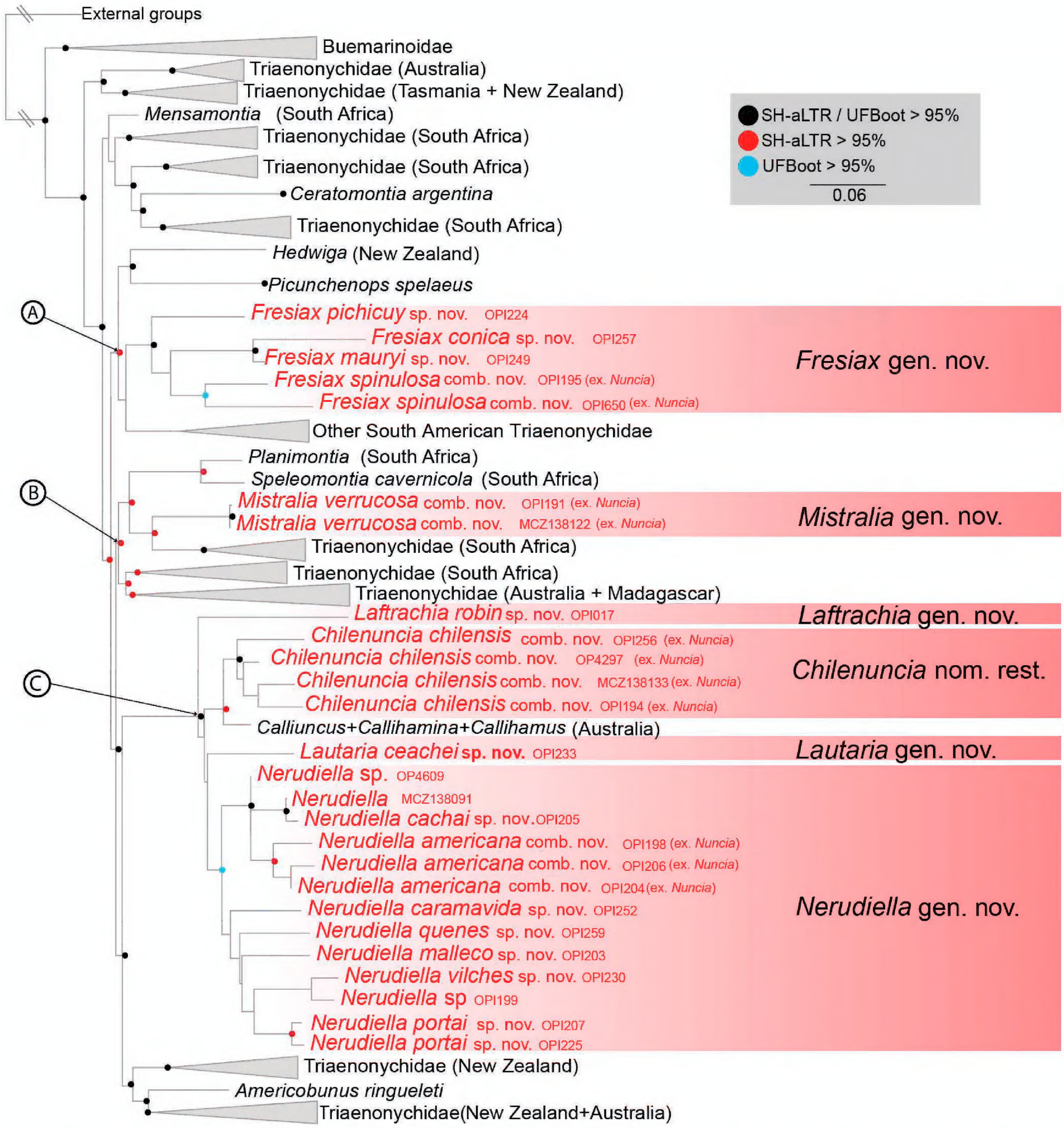

Figure 3. Phylogenetics relationships of Triaenonychidae, with clade names as discussed in the main text. Phylogeny is derived from the IQ-TREE analysis. Nodes without circles have < 95% bootstrap support to AH-aLR and UFBoot.

ing sister to other South American triaenonychids clade, "*Nuncia*" *verrucosa* being related to a core of South African species. Nevertheless, "*Nuncia*" *chilensis* being closely related to a series of Australian genera (*Calliuncus*, *Callihamina*, and *Callihamus*), and "*Nuncia*" *americana* form a clade with other six new South American species. This finding is in most part consistent with previous hypotheses based on both Sanger data and UCEs (Baker et al. 2020; Derkarabetian et al. 2021a; Porto et al. 2022).

Our analyses consistently recovered three independent lineages with SH-aLTR high support (clades A and B) or SH-aLTR and UFboot high support (clade

C) where the representatives of the South American *"Nuncia"* are nested. We discuss the phylogenetic relationships of the South American *"Nuncia"* based on the preferred tree obtained in the IQ-TREE results (Fig. 3).

We recovered the species originally described as *Nuncia spinulosa* Maury, 1990, deeply nested inside the big clade A (SH-aLTR > 95%). We herein combined under *Fresiax* gen. nov. the species: *Fresiax spinulosa* comb. nov. and related species (*F. conica* sp. nov., *F. mauryi* sp. nov., *F. pichicuy* sp. nov. – based on molecular and morphological evidence – and *F. fray* sp. nov. based on morphological evidence only). The monophyly of *Fresiax* gen. nov. received strong support from both SH-aLTR and UFBoot methods. This new genus exhibits a close relationship with other South American Triaenonychidae genera, including *Adrianonyx*, *Araucanobunus*, *Diasia*, *Nahuelonyx*, *Triaenonychoides*, *Triaenonyx* and *Valdivionyx* (see Suppl. material 2). Additionally, it shares connection with the New Zealand genus *Hedwiga* and the South American cave relictual species *Picunchenops spelaeus*. The early divergence within clade A suggests that *Picunchenops spelaeus* has more affinities with the New Zealand genus *Hedwiga* than with other South American representatives of this clade. Besides *Fresiax spinulosa* comb. nov., we described four other new species, three of which have accompanying molecular data.

In contrast "*Nuncia*" *verrucosa* Maury, 1990, does not show a relationship with South American triaenonychids. Instead, it is recovered as the sister group of South African species, including *Adaeulum*, *Larifuga*, *Larifugella*, and *Paradaeum* (SH-aLTR > 95%) (see Suppl. material 2). This group of species is deeply nested in the clade B (SH-aLTR > 95%), which is composed of South African, Malagasy, and Australian species (Fig. 3). To name this distinct genus, we described *Mistralia* gen. nov., and consequently, we introduce the new combination *Mistralia verrucosa*. Due to the external and genital morphological affinities (no molecular data available), we described a second species to this genus, *Mistralia ramirezi* sp. nov. The unique morphology of *Mistralia* was first noted by Maury (1990) when he established the "verrucosa group."

Clade C (SH-aLTR and UFBoot > 95%) represents the most diverse and intricate group, comprising triaenonychids that were previously classified or could be classified within the former concept of South American "*Nuncia*". Clade C includes the previously known species *"Nuncia" americana* and *"Nuncia" chilensis*. However, both species are recovered as part of different lineages. For *"Nuncia" chilensis*, we have reinstated the previously synonymized genus *Chilenuncia* Muñoz-Cuevas, 1971, and consequently established the new combination *Chilenuncia rostrata*. Unfortunately, we do not have molecular data of "*Nuncia*" *rostrata* Maury, 1990, but the morphological similarities with *Chilenuncia chilensis* support our decision of include this species in the genus *Chilenuncia* combining them as *Chilenuncia rostrata* comb. nov. Our four terminals identified as *Chilenuncia chilensis* comb. nov. were strongly (SH-aLTR > 95%) recovered as monophyletic and are sister of a monophyletic group that includes the Australian genera: *Calliuncus* Roewer, 1931, *Callihamina* Roewer, 1942, and *Callihamus* Roewer, 1931. This group exhibits an extraordinary stasis in their external morphology, but the genital morphology supports the South American representatives as a different genus as well as the molecular evidence. This morphological stasis could be responsible for the original description as *Parattahia chilensis* Soares, 1968, but the examination of the type species

Parattahia u-signata Roewer, 1914, and their male genital morphology (data not showed) not support the inclusion in the same genus and reinforce the restoration of *Chilenuncia*. The relationship and limits of the genera *Parattahia*, *Calliuncus*, *Callihamina*, and *Callihamus* deserve further attention. The phylogenetic relationship between *Chilenuncia* and the Australian genera was also recovered by Derkarabetian et al. (2021a) who estimated a divergence between the South American and Australian species of approximately 40 million years ago.

As part of the Clade C, we recovered a clade with strong UFBoot support that included the previous species *Nuncia americana* Roewer, 1961, plus several new species. We described the genus *Nerudiella* gen. nov. to accommodate all the species closely related with "*Nuncia*" *americana*. Besides *Nerudiella americana* comb. nov. we have described fifteen new species based on morphology and six of them also based on molecular evidence. This is a remarkably diverse group of South American triaenonychid that exhibits a very interesting radiation that deserves further studies. Finally, in the Clade C, we described two new monotypic genera, namely *Laftrachia* gen. nov. and *Lautaria* gen. nov.

The entire Clade C is recovered with high support (SH-aLTR and UFBoot > 95%) as sister of another clade, primarily composed of Australian and New Zealand species, were the South American monotypic relict taxon *Americobunus ringueleti* Muñoz-Cuevas, 1972, is nested.

Biogeographical remarks

A comprehensive biogeographic study of Triaenonychidae has been conducted by Derkarabetian et al. (2021a), where all South American lineages recovered in our study were represented. The lineages which are here called A, B, and C are equivalent to clades C, D, and E in Derkarabetian et al. (2021a). Our study contains a denser sampling of South American triaenonychids and thus, examining them in the context of the divergence dating in Derkarabetian et al. (2021a) reinforces interesting biogeographic relationships. We know that Triaenonychidae is an ancient group, they existed for ~ 237 million years, predating the fragmentation of Gondwana initiated around 180 million years ago. Our South American lineages A, B, and C exhibit a highly complex biogeographic history with their origin and early diversification predating Gondwanan fragmentation. Other groups like the new genus *Mistralia*, appear to have originated from a cladogenetic event coinciding with the split of West Gondwana into South America and Africa, occurring ~ 140 million years ago. The divergence between the Australian taxa *Calliuncus–Callihamus–Callihamina* and the South American restored genus *Chilenuncia* (clade C) is estimated to have occurred approximately 45 million years ago, suggesting the possibility of a land connection between South America and Australia via Antarctica (see Derkarabetian et al. 2021a). This is not only an interesting biogeographic pattern to be further studied—a pattern that nonetheless includes a remarkable long-distance oceanic dispersal to the Crozet Islands (Baker et al. 2020)—but also from a morphological point of view because it contains an astonishing stasis.

A time-calibrated phylogeny with denser sampling, including the new taxa described here and other representatives of South American triaenonychids, is currently underway where this and other biogeographic and evolutionary questions will be addressed on a more regional scale within South America.

Taxonomic section

Clade A

Genus *Fresiax* gen. nov.

https://zoobank.org/88A21A16-8380-4FDE-9EB5-DEC3BC2276DD
Figs 5–34

Nuncia [part] (only references to *Nuncia spinulosa*): Maury 1990: 108; Maury 1992: 5; Acosta and Maury 1998: 579; Kury 2003: 22.

Etymology. The genus name *Fresiax* is a combination of "Fresia," the name of the wife of Mapuche's military leader Caupolicán, and the Greek word ὄνυξ (onyx = nail, claw), which is part of the generic name *Triaenonyx*, the type genus of the family Triaenonychidae. The genus name *Fresiax* is feminine.

Diagnosis. The male genitalia of *Fresiax* exhibits a pars distalis considerably reduced (as in *F. mauryi* sp. nov.), a ventral plate longer than the capsula externa (as in *F. conica* sp. nov.), and a capsula externa divided into two lamellae, a character that distinguishes it from any other triaenonychid genus. Additionally, the pedipalp femora possesses at least three dorsal and four ventral spines.

Type species. *Nuncia spinulosa* Maury, 1990

Included species. *Fresiax conica* sp. nov., *Fresiax fray* sp. nov., *Fresiax mauryi* sp. nov., *Fresiax pichicuy* sp. nov., *Fresiax spinulosa* (Maury, 1990), comb. nov.

Distribution. Argentina: Río Negro Province. Chile: Coquimbo, Valparaíso, Araucanía, Los Ríos, Los Lagos (Fig. 4A).

Fresiax conica sp. nov.

https://zoobank.org/5E85033C-CB20-4C7D-B42D-EEE6FFFF443B
Figs 5–10

Material examined. ***Holotype***. ♂ **Chile.** Choapa: Cuesta Cavilolén, 31.76669°S, 71.32727°W, 300 m, M. Ramírez, A. Ojanguren, J. Pizarro coll. 11.II.2011 (MNHNCL). ***Paratypes***. **Chile.** Choapa: Los Vilos, Cuesta Caviolén, 30 km NE de Los Vilos, E. Maury coll., 1 ♀ 12.XII.1987 (MACN). Choapa: Los Vilos, Cuesta Caviolén, 30 km NE de Los Vilos, E. Maury coll., 1 ♀ 12.XII.1987 (MACN).

Etymology. The term "conica" refers to the shape of the ocularium, which is conical and lacks an apophysis. The specific epithet was also a name "in schedula" by the late Dr. Emilio Maury that labeled the specimens. Maury early recognized this species as a new but never published. We keep the Maury's specific name to maintain the name preference of the researcher who first recognized this species as new.

Diagnosis. The conical ocularium, without acute apophysis, clearly distinguishes this species from others in the genus. There is only one row of tubercles on the anterior region of the dorsal scutum. The apical section of the tubular capsula interna is subtriangular.

Distribution. Chile: Coquimbo Region (Fig. 4A).

Description of male. Measurements: Total length 2.01, carapace length 0.78, dorsal scutum length 1.30, carapace max. width 1.05, mesotergum max. length 1.50. Appendage measurements: Pedipalps. Length of trochanter 0.13, length

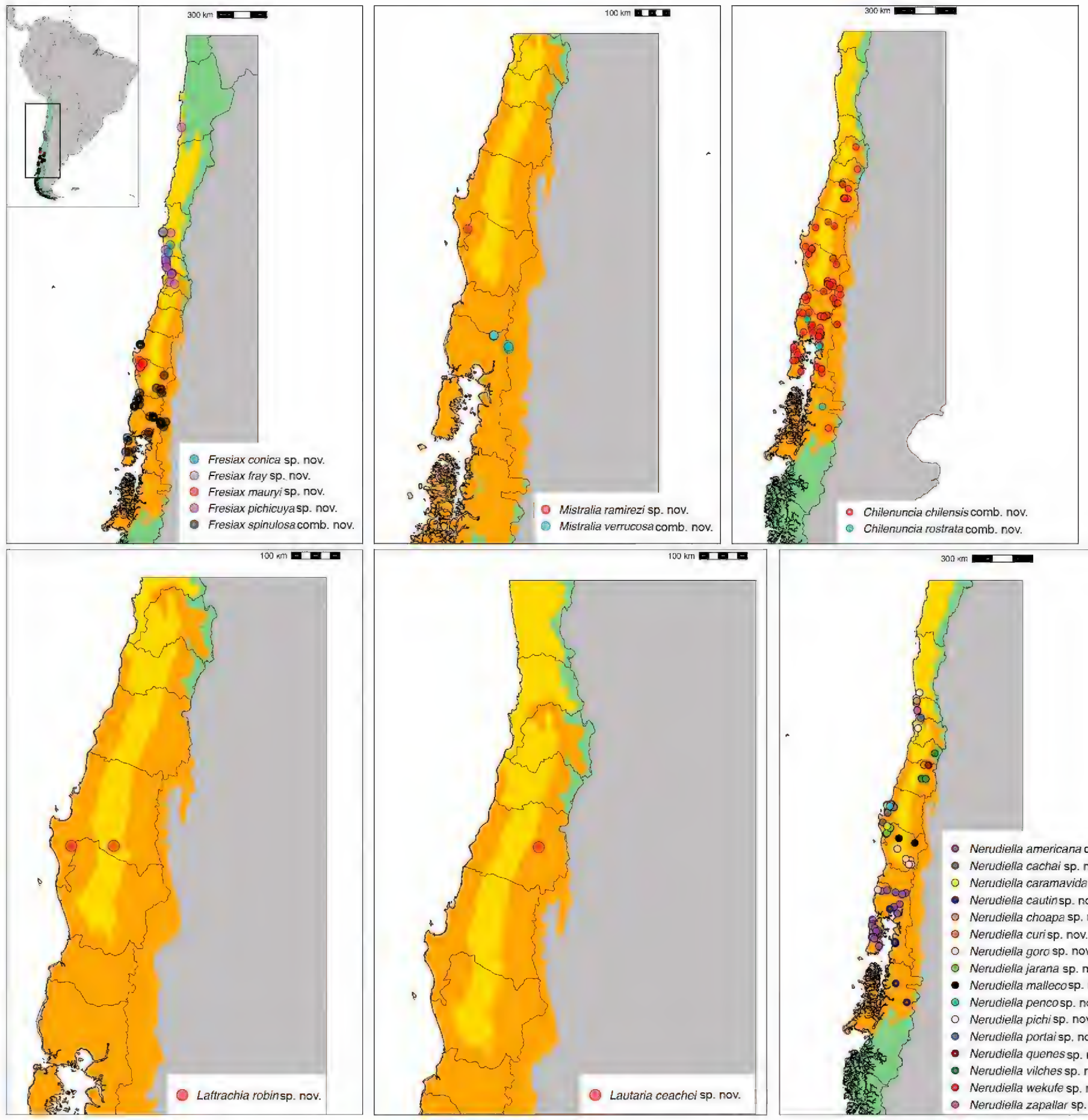

Figure 4. Maps showing the distribution of the species used in this work. South America (Chile and western Argentina inset). Chile in green, Argentina/ South America in grey. Terrestrial ecoregions (following Olson et al. 2001) highlighted in yellow (Chilean Matorral) and orange (Valdivian temperate forests).

of femora 0.80, length of patella 0.46, length of tibia 0.53, length of tarsus 0.62. Leg I: trochanter (tr) 0.16, femora (fe) 0.16, patella (pa) 0.74, tibia (ti) 0.38, metatarsus (mt) 0.51, tarsus (ta) 0.62. II: tr 0.46, fe 0.22, pa 1.03, ti 0.41, mt 0.80, ta 0.98. III: tr 0.93, fe 0.19, pa 0.68, ti 0.36, mt 0.60, ta 0.67. IV: tr 0.62, fe 0.26, pa 1.04, ti 0.46, mt 0.80, ta 1.11.

Dorsum (Fig. 5, 6). Eta (η) or hourglass-shaped dorsal scutum (Kury and Medrano 2016). Ocularium conical with a group of ~ 20 setiferous tubercles. Eyes located on the middle of the ocularium. Dorsal scutum microgranulate with a row of setiferous tubercles on each side of the ocularium, without clear delimitation of the mesotergal areas. Areas I–IV and posterior margin with seta, I with two, II and III with four, and IV and posterior margin with six. All free tergites bear a row of small, setiferous, rounded granules.

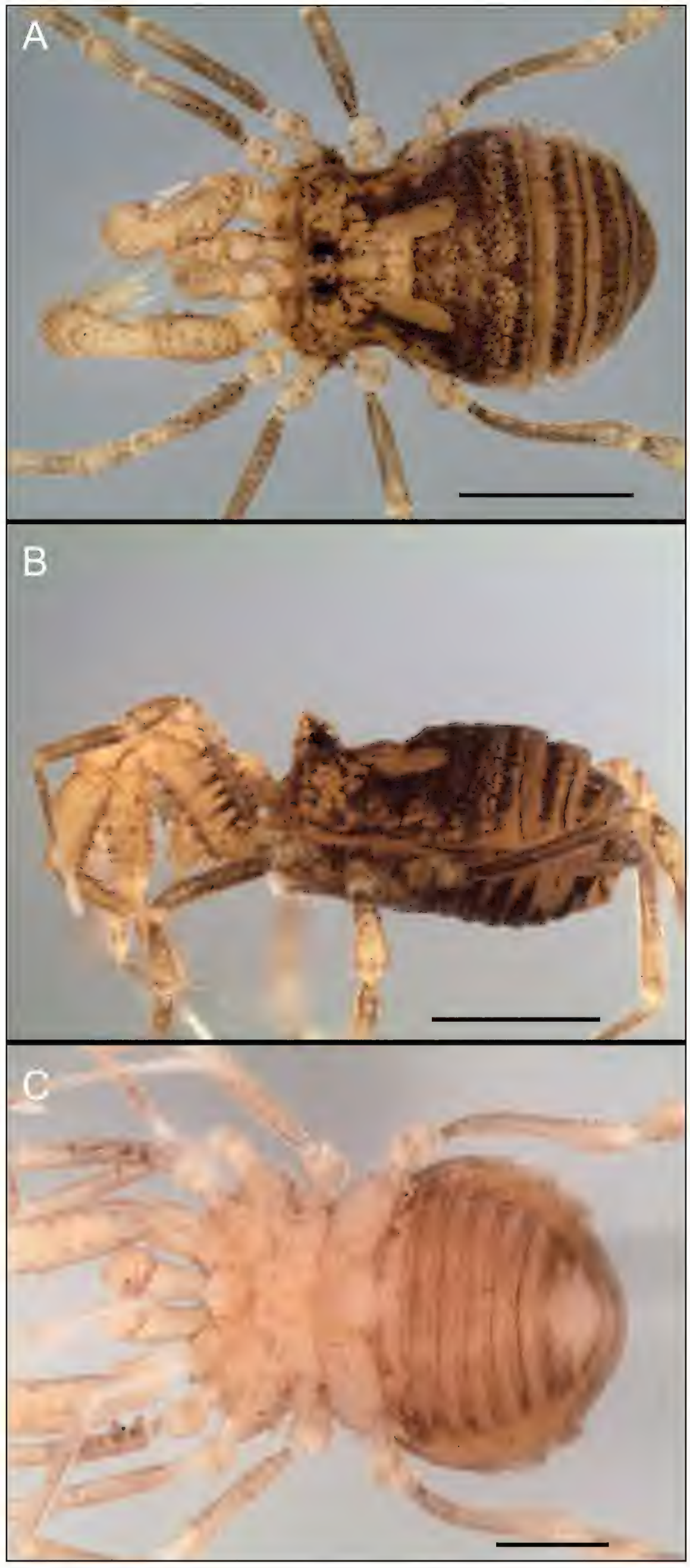

Figure 5. *Fresiax conica* sp. nov. male **A** dorsal view **B** lateral view **C** ventral view. Scale bars: 1 mm. Species of Clade A, see Fig. 3.

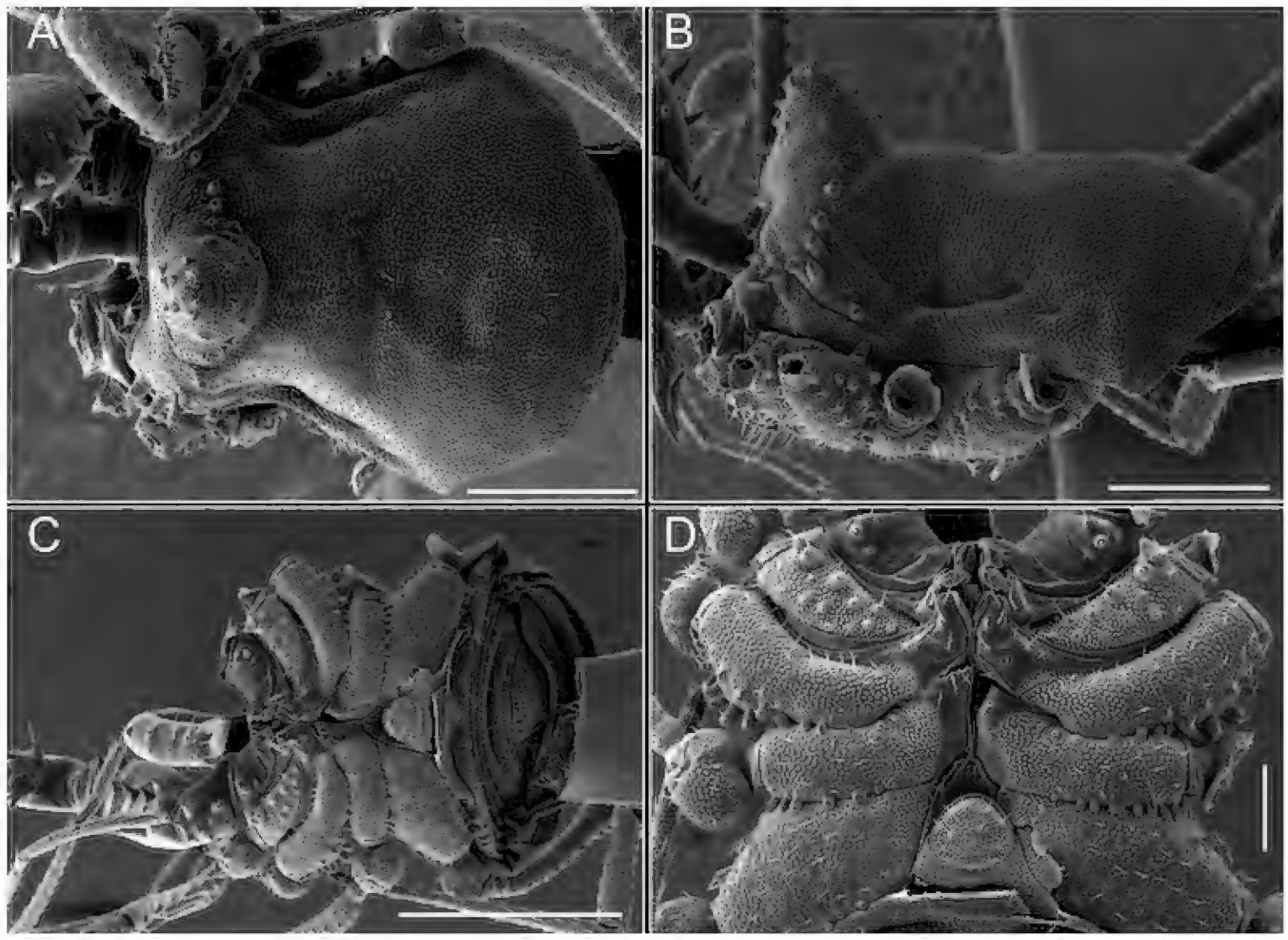

Figure 6. *Fresiax conica* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 µm (**A, B, C**); 200 µm (**D**).

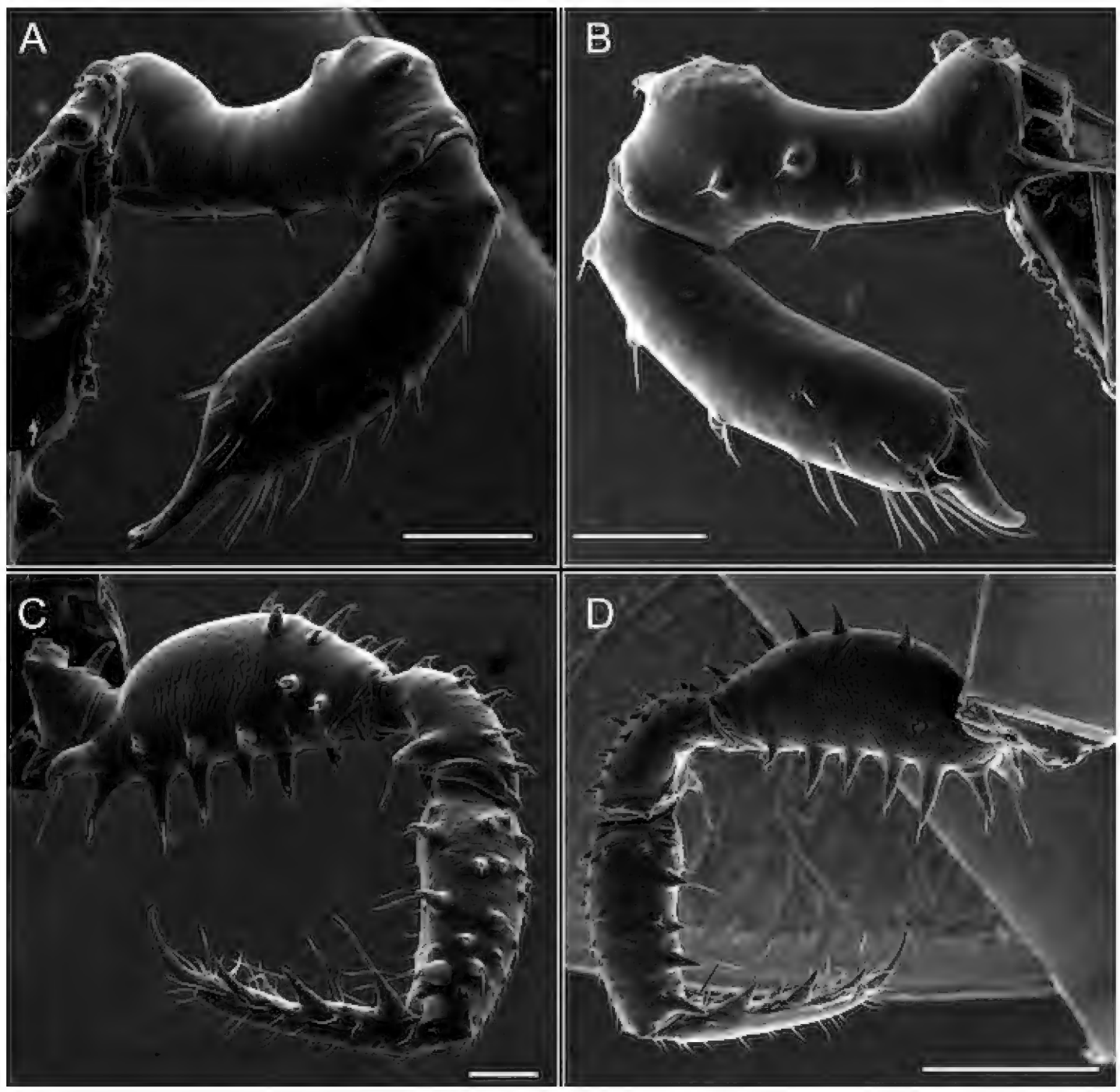

Figure 7. *Fresiax conica* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm.

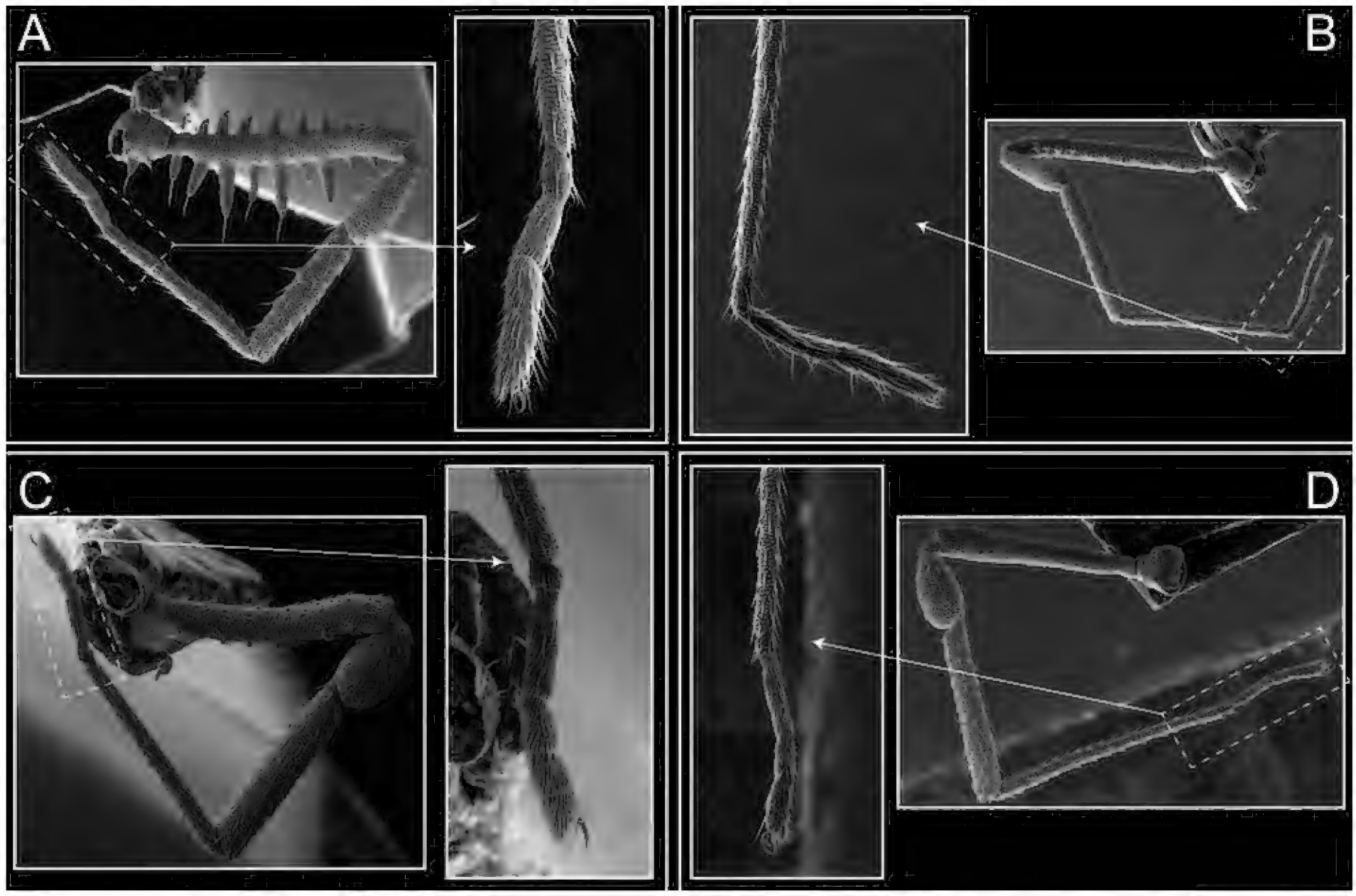

Figure 8. *Fresiax conica* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

Chelicerae (Fig. 7A, B). Segment I with few sparse setae. Segment II with three small frontal tubercles and sparse setae.

Pedipalps (Fig. 7C, D). Trochanter with long ventral and dorsal spines. Femora bearing a remarkable ventral-proximal subtriangular spine with long subdistal setae; a row of four ventral spines, with subdistal setae and six dorsal small spines with setae. Patella bearing a notable mesal spine with long setae. There are two rows of small setiferous tubercles on the dorsal patella-tarsus. Tibia shows a ventral row of four long spines. Tarsus with three mesal and ectal setiferous spines.

Legs (Fig. 8). Coxa I with two rows of setiferous tubercles, the distal one with a subdistal setae. II–IV are microgranulate, with four bridges between the legs II and III, 6–8 bridges between the legs III and IV, seven between the leg IV and the opisthosoma. Spiracles not covered by bridges. The smooth surface represents < ¼ of coxa and leg III. Sternum arrow-shaped. Legs I–IV covered in setae, tarsal area and calcaneus are also setose. Trochanter I with small ventral granules. Femora I with a row of nine dorsal and ventral setiferous tubercles. Calcaneus is shorter than astragalus (7× shorter in leg I, 8× in II, 13× in III, 15× in IV). Tarsal count 3–6–4–4.

Penis (Figs 9, 10). Pars distalis has a large ventral plate with a cleft separating the plate into two lamellae. Each one bears three acute macrosetae on the ventral surface and one acute macroseta on the dorsal surface. Capsula externa is cleft and covers the dorsal and lateral surfaces. The Capsula interna is tubular with an apical subtriangular portion.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 1.91, length of carapace 0.76, length of dorsal scutum 1.29, max. width of carapace 1.04, max. width of mesoter-

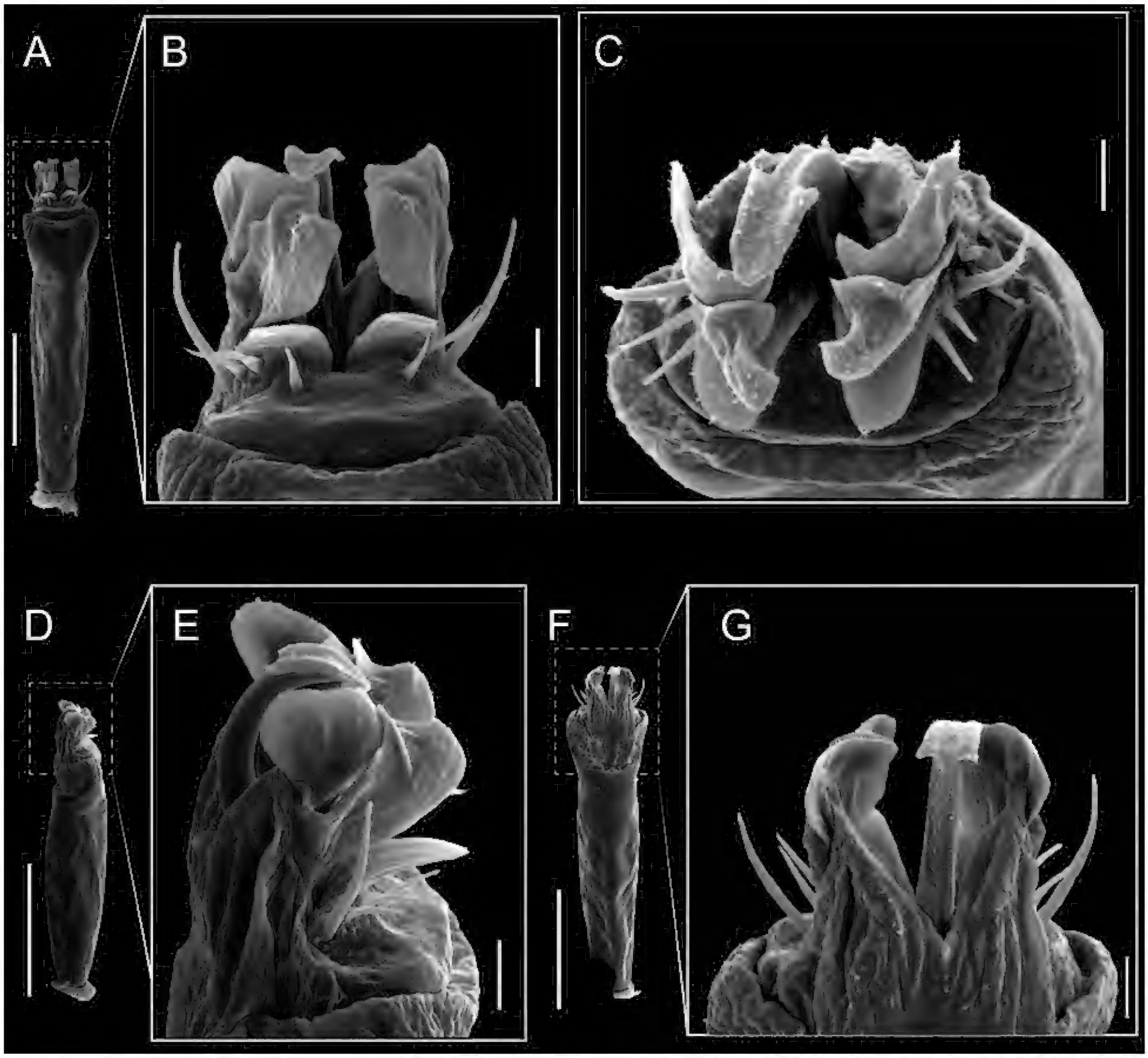

Figure 9. *Fresiax conica* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 20 µm (**B, C, E, G**).

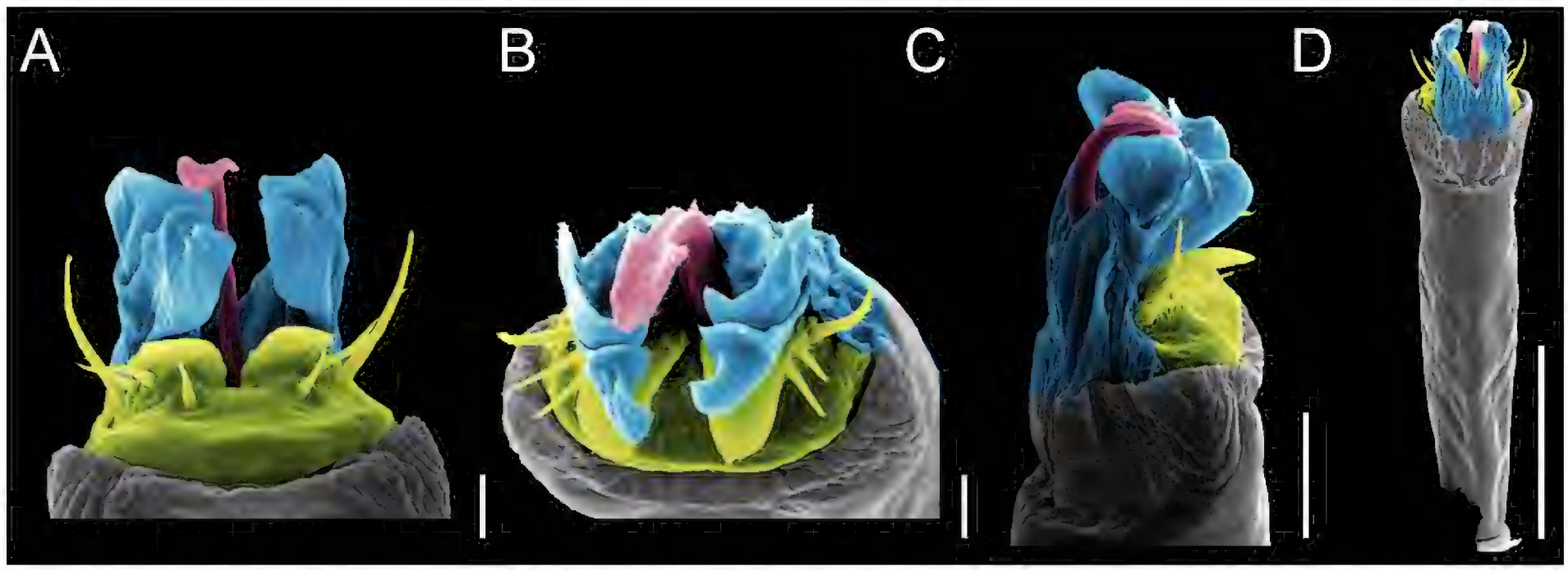

Figure 10. *Fresiax conica* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 20 µm (**A, B**); 50 µm (**C, D**).

gum 1.47. Appendage measurements: Pedipalps. Length of trochanter 0.20, length of femora 0.76, length of patella 0.43, length of tibia 0.63, length of tarsus 0.56. Leg I: trochanter (tr) 0.26, femora (fe) 0.88, patella (pa) 0.38, tibia (ti) 0.56, metatarsus (mt) 0.64, tarsus (ta) 0.384. II: tr 0.23, fe 1.14, pa 0.53, ti 0.84, mt 0.90, ta 0.73. III: tr 0.22, fe 0.88, pa 0.36, ti 0.69, mt 0.88, ta 0.43. iv: tr 0.23, fe 1.07, pa 0.49, ti 0.95, mt 1.26, ta 0.61.

***Fresiax fray* sp. nov.**

https://zoobank.org/0F310737-611E-4AB6-B41D-FD12B585ECA5

Figs 11–16

Material examined. ***Holotype***. ♂ **Chile.** Coquimbo: Bosque de Fray Jorge, E. Maury coll. 03.XI.1988 (MNHNCL). ***Paratypes***. **Chile.** Coquimbo: Limarí, Bosque Fray Jorge, P.N. Fray Jorge, E. Maury coll. 03.XI.1988, 38 ♂ 24 ♀, amm. (MACN).

Additional material. Chile: Coquimbo: Limarí, Bosque Talinay, P.N. Fray Jorge, relict Valdivian fog forest, R. Schuh, N. Platnick coll., 08.II.1986, 66 specimens (AMNH).

Etymology. The epithet *fray*, a noun in apposition, refers to the type locality of the species, Bosque Fray Jorge National Park.

Diagnosis. This species can be easily distinguished from the other species of the genus by its small size (< 2 mm long), conical ocularium, with an apophysis at an angle of 45 °.

Distribution. Chile, Coquimbo Region (Fig. 4A).

Description of male. Measurements: Total length 1.81, carapace length 0.69, dorsal scutum length 1.47, carapace max. width 1.14, mesotergum max. length 1.49. Appendage measurements: Pedipalps. Length of trochanter 0.13, length of femora 0.80, length of patella 0.46, length of tibia 0.53, length of tarsus 0.62. Leg I: trochanter (tr) 0.16, femora (fe) 0.74, patella (pa) 0.38, tibia (ti) 0.51, metatarsus (mt) 0.62, tarsus (ta) 0.46. II: tr 0.22, fe 1.03, pa 0.41, ti 0.80, mt 0.98, ta 0.93. III: tr 0.19, fe 0.68, pa 0.36, ti 0.60, mt 0.67, ta 0.62. IV: tr 0.26, fe 1.04, pa 0.46, ti 0.80, mt 1.11, ta 0.57.

Dorsum (Fig. 11, 12). Eta (η) hourglass-shaped dorsal scutum. Ocularium conical, with a small, forward-pointing apical spine and small setae. Eyes located on the distal region of the ocularium. Dorsal scutum microgranulate with no clear area delimitation. Areas I–III with two small setiferous granules, IV with three, posterior margin with a row of small setiferous granules. All free tergites with a row of small setiferous granules.

Chelicerae (Fig. 13A, B). Segment I characterized by a smooth surface without any prominent tubercles or setae. In contrast, segment II with a small frontal tubercle and covered in setae. Segment II with more pronounced texture and setal coverage compared to the smooth surface of segment I.

Pedipalps (Fig. 13C, D). Trochanter with a dorsal and a ventral spine, both with setae. Femora with a row of four dorsal spines with subdistal setae, a row of five ventral spines with setae, the proximal one with a subtriangular shape; two dorsal and distal tubercles with setae, a row of five small mesal tubercles with setae, and three small distal tubercles with setae. Patella with two rows of three tubercles with setae, two small mesal tubercles with setae, and few ventral granules. Tibia with four ectal and mesal spines with subdistal setae; three

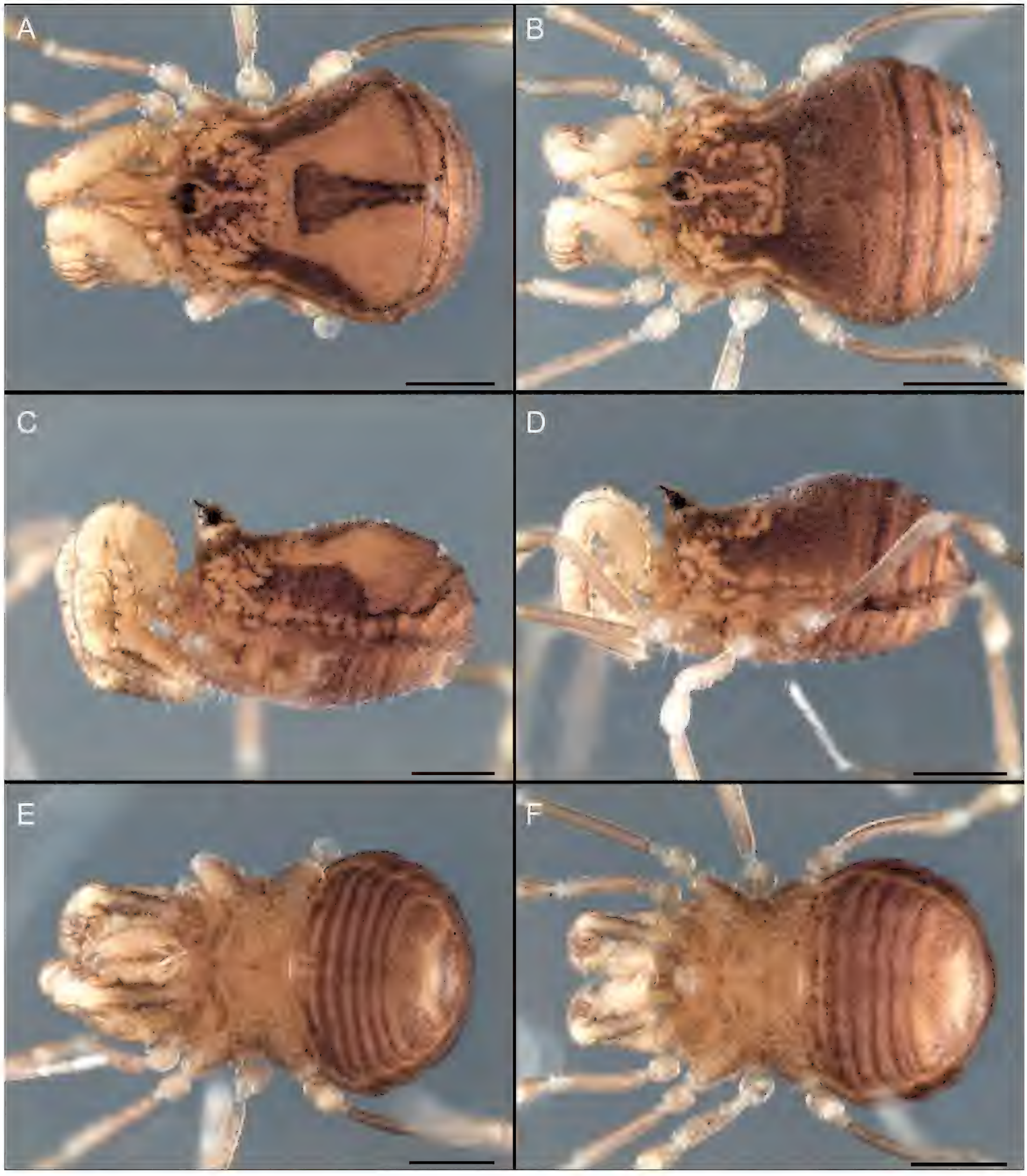

Figure 11. *Fresiax fray* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 500 µm. Species of Clade A, see Fig. 3.

ventral tubercles with setae and two rows of 4–5 granules with setae on the dorsal surface. Tarsus with three mesal and ectal spines with subdistal setae, as well as few setae and granules.

Legs (Fig. 14). Coxa I bearing small setiferous tubercles and a row of three long tubercles with subdistal setae; II–IV with microgranulation, bearing 4–6 bridges between legs II and III, five or six between III and IV, six or seven between

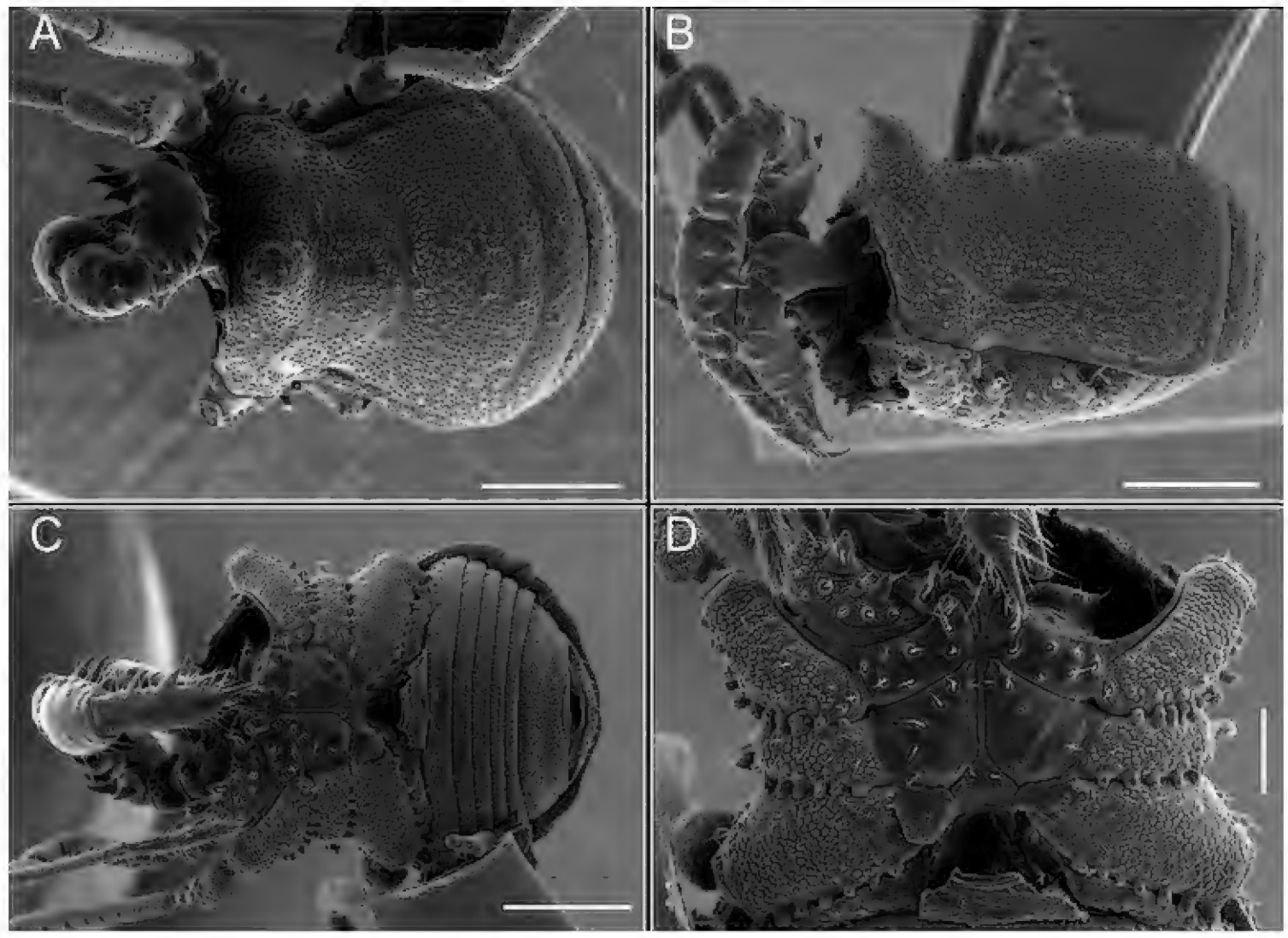

Figure 12. *Fresiax fray* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 µm (**A, B, C**); 200 µm (**D**).

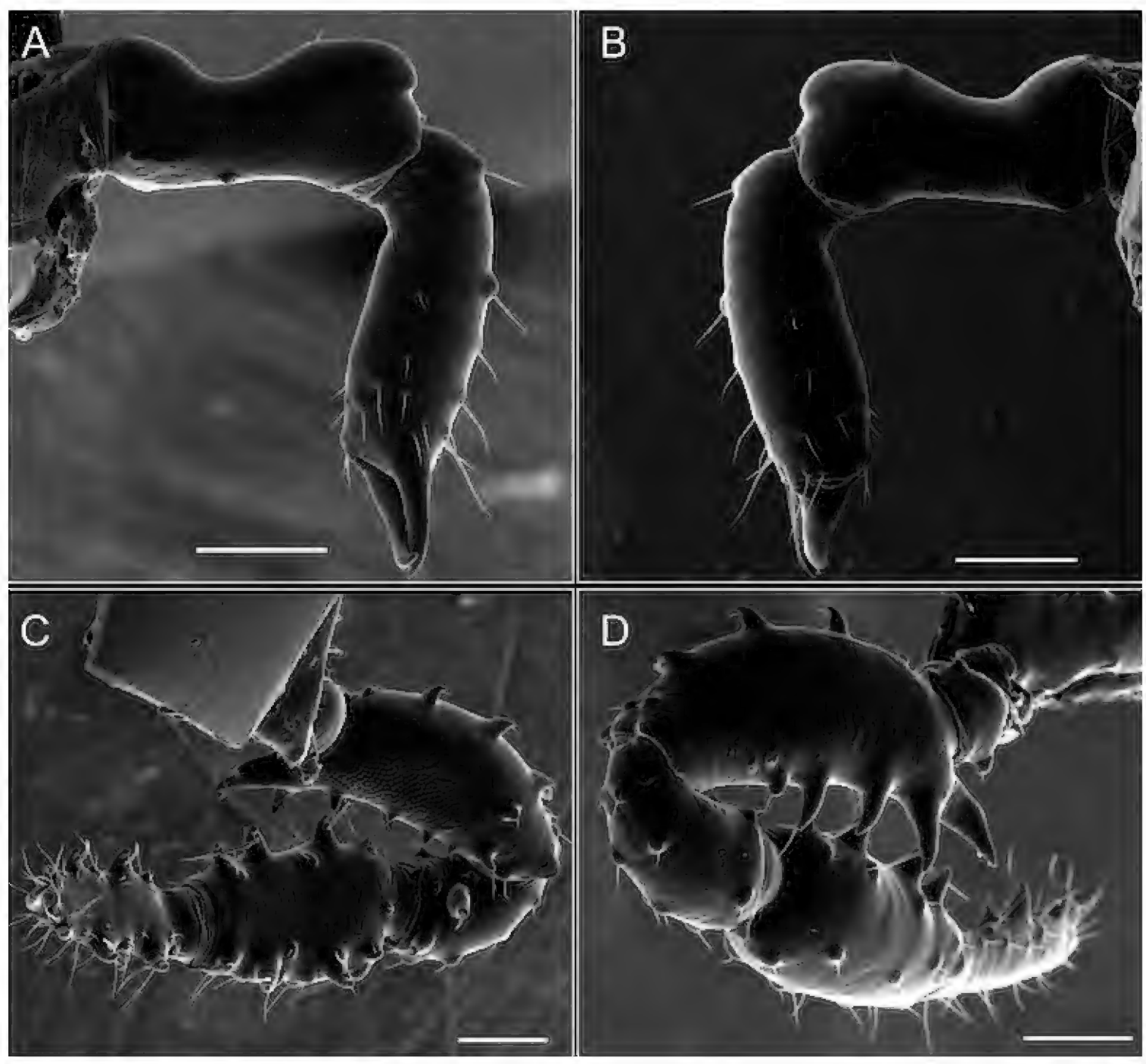

Figure 13. *Fresiax fray* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm.

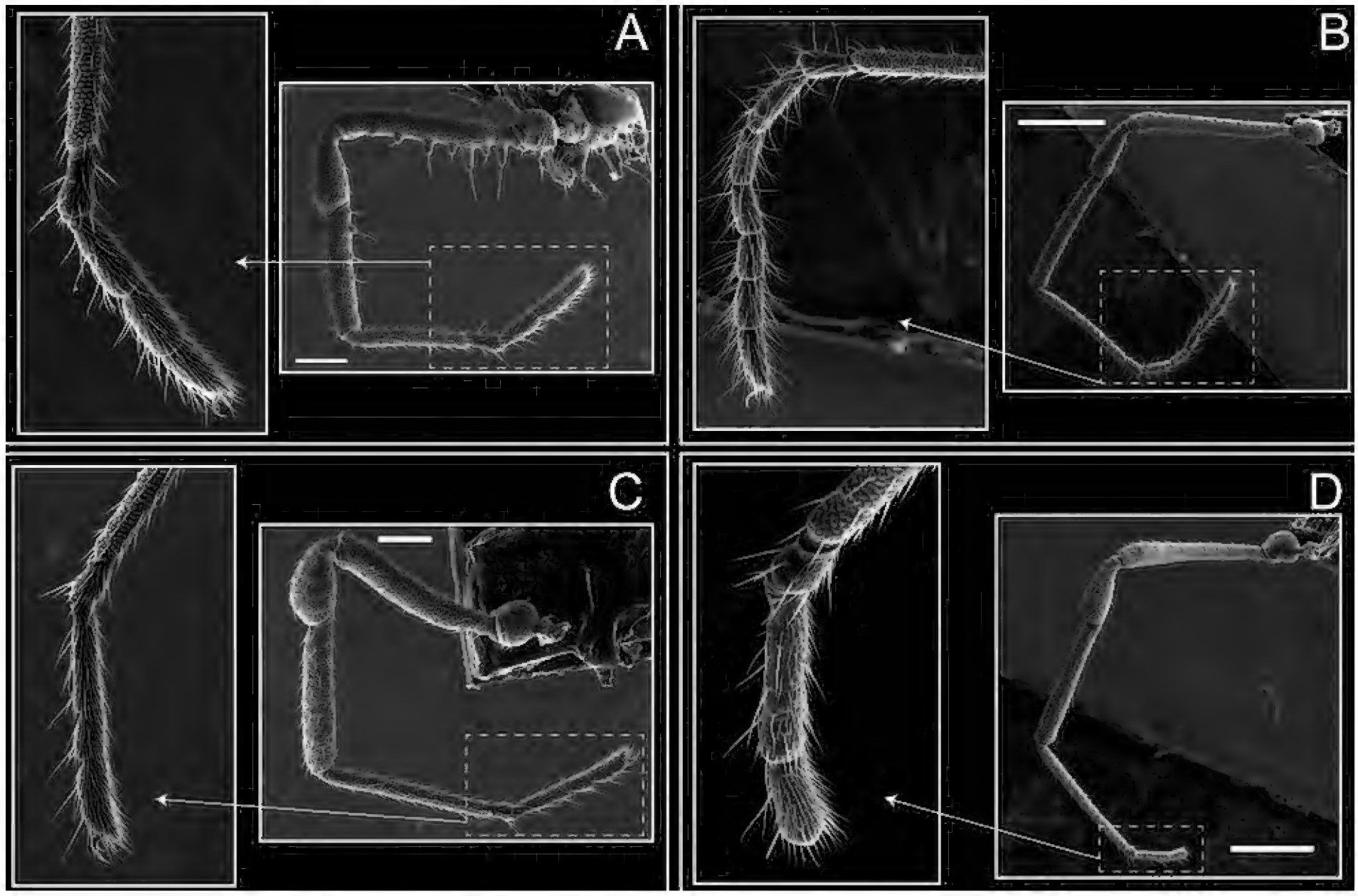

Figure 14. *Fresiax fray* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm (**A, C**); 500 µm (**B, D**).

leg IV and the opisthosoma. Spiracles not visible. Smooth area occupies ⅓ of the leg II, almost ½ of III, and only a small proximal portion of the leg IV. Smooth area of leg II with five small setiferous tubercles, III with a row of four and an anterior process directed to the sternum. Sternum arrow-shaped, with a triangular posterior area. Leg I trochanter with three small ventral setiferous tubercles and one dorsal tubercle. Femora of leg I with a row of seven setiferous tubercles and a dorsal row of small setiferous tubercles. Tibia of leg I with 3–4 ventral tubercles with setae. Legs II–IV covered in setae, with the tarsus and calcaneus area densely covered in setae. Calcaneus smaller than astragalus, ≥ 4× smaller in leg I, 5× smaller in leg II, 8× smaller in leg III, and 7× smaller in leg IV. These differences in size ratios between the calcaneus and astragalus serve as distinguishing characteristics among the legs of this species. Tarsal count 3–6–4–4.

Penis (Figs 15, 16). Pars distalis with a ventral plate and a prominent cleft that divides the plate into two lamellae. Each lamella is equipped with three macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa nearly as long as the capsula interna, having a notch that divides the capsula externa into two halves.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 1.54, length of carapace 0.61, length of dorsal scutum 1.31, max. width of carapace 0.96, max. width of mesotergum 1.35. Appendage measurements: Pedipalps. Length of trochanter 0.11. Length of femora 0.58, length of patella 0.37, length of tibia 0.45, length of tarsus 0.46. Leg I: trochanter (tr) 0.18, femora (fe) 0.62, patella (pa) 0.33, tibia (ti)

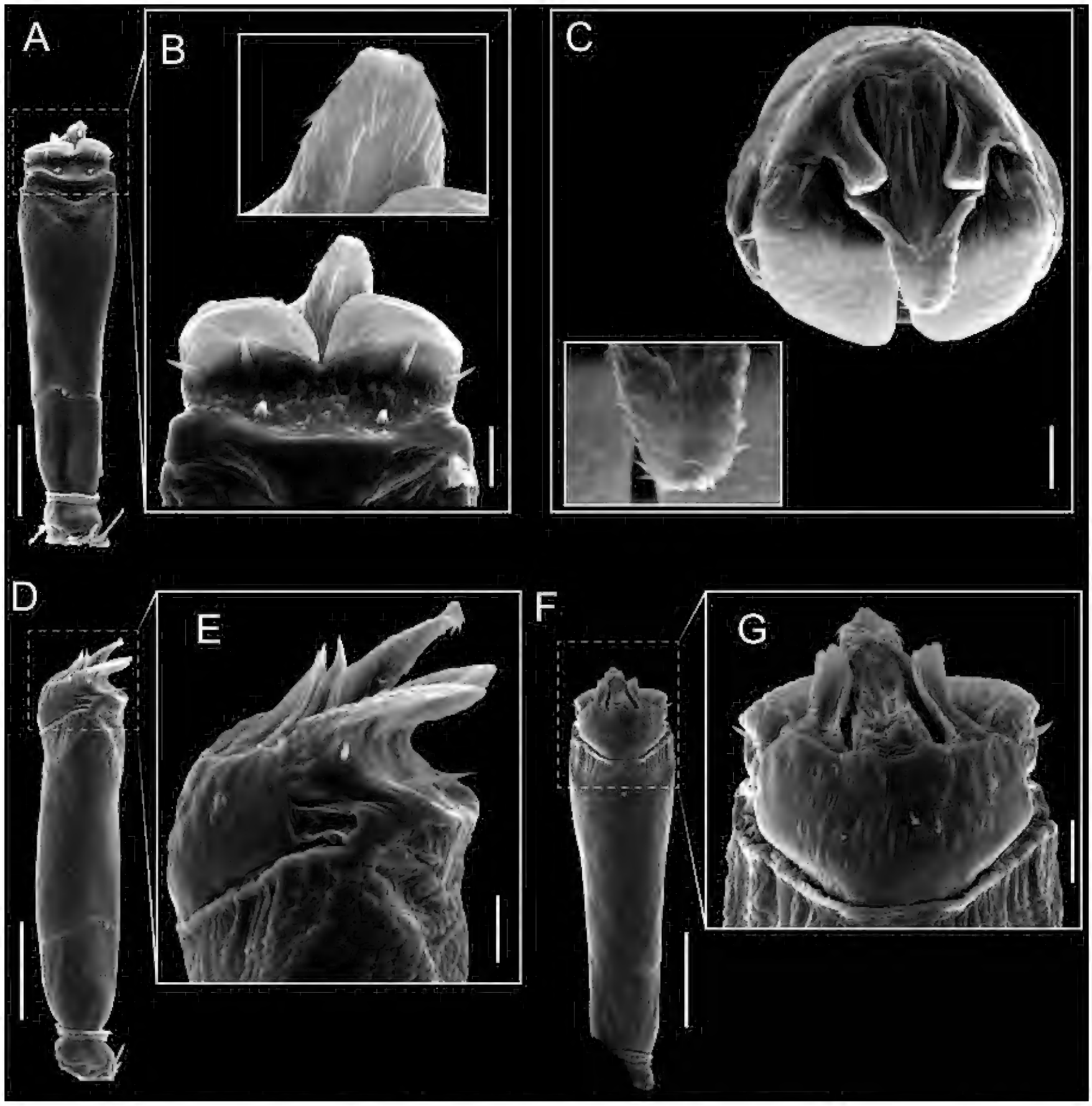

Figure 15. *Fresiax fray* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 100 µm (**A, D, F**); 20 µm (**B, C, E, G**).

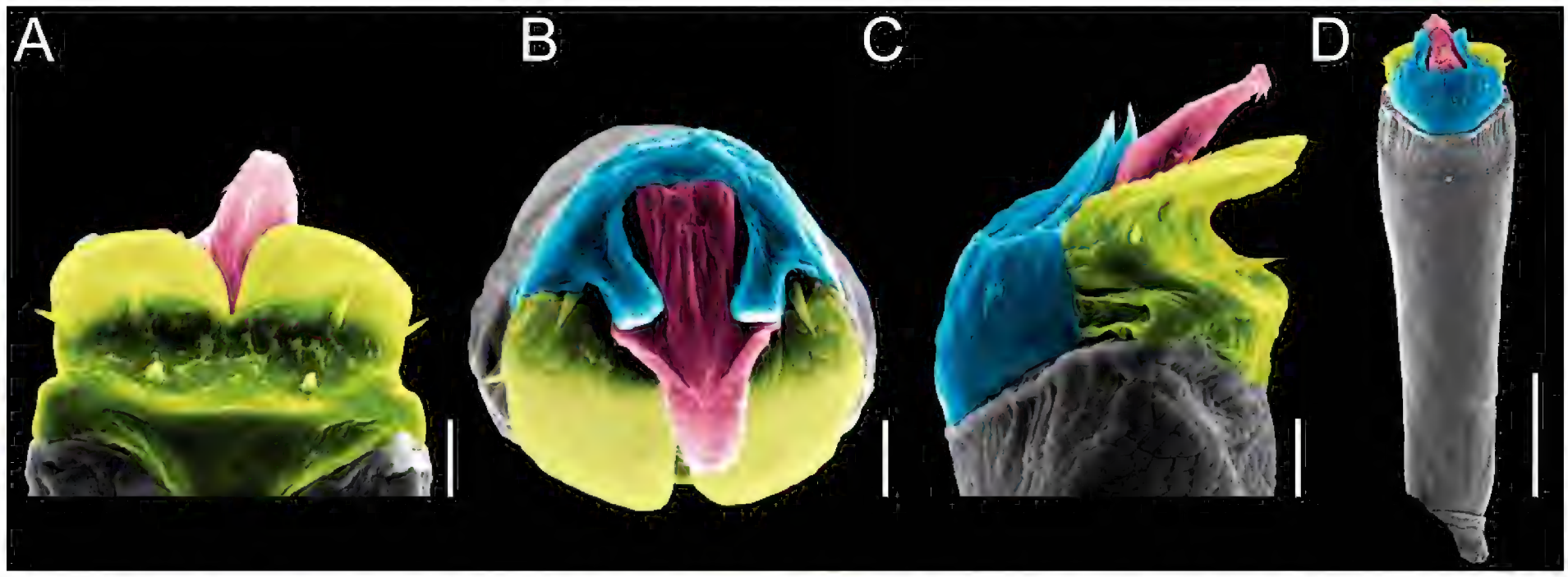

Figure 16. *Fresiax fray* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 20 µm.

0.46, metatarsus (mt) 0.53, tarsus (ta) 0.42. II: tr 0.18, fe 0.88, pa 0.34, ti 0.71, mt 0.84, ta 0.86. III: tr 0.18, fe 0.62, pa 0.26, ti 0.53, mt 0.68, ta 0.49. IV: tr 0.21, fe 0.80, pa 0.37, ti 0.73, mt 0.98, ta 0.57.

***Fresiax mauryi* sp. nov.**

https://zoobank.org/4DA933F8-1369-4BCE-B27B-E068D0A74188

Figs 17–22

Material examined. ***Holotype*.** ♂ **Chile.** Monumento Natural Contulmo, 38.01501°S, 73.17981°W, 360 m, M. Ramírez & F. Labarque coll., 10.II.2005 (MNHNCL). ***Paratypes*. Chile.** Cautín: Lago Caburgua, 39.20749°S, 71.80529°W, S. Peck J. Peck coll., 15.XII.1984, 1 ♂ (AMNH). Llanquihue: P.N. Alerce Andino, Correntoso, sendero Huillifoten, 41.58235°S, 72.61738°W, 135 m, M. Ramírez & F. Labarque coll., 03.II.2005, 1 ♀ (MACN). Malleco, Monumento Natural Contulmo, 38.01501°S, 73.17981°W, E. Maury coll., 13.I.1989, 1 ♂ 1 ♀ (MACN). Malleco: P.N. Nahuelbuta, 37.81477°S, 72.9967°W, M. Ramírez & F. Labarque coll., 12.II.2005, 1 ♂ (MACN). Malleco: Monumento Natural Contulmo, 38.01501°S, 73.17981°W, 360 m, M. Ramírez & F. Labarque coll., 10.II.2005, 1 ♀ (MACN), P.N. Nahuelbuta, 37.81477°S, 72.9967°W, M. Ramírez & F. Labarque coll., 12.II.2005, 5 ♂ 13 ♀ 6 imm. (MACN).

Additional material. Chile. Malleco, Monumento Natural Contulmo, 38.01624°S, 73.17942°W, 361 m, G. Giribet, G. Hormiga, A. Pérez-González coll. 13.XI.2014 (MACN). Same locality, 38.01625°S, 73.17902°W, M. Ramírez, M. Izquierdo, P. Michalik, C. Wirkner, K. Huckstorf coll., 09.II.2012, 1 imm. (MACN). Caramávida, San Alfonso, Quebrada Caramávida, San Alfonso, Reserva Arauco, 37.70942°S, 73.17107°W, 750 m, 15.I.2018, 1 ♀ (MACN), Quebrada Caramávida, "sector 9", Reserva Arauco, 37.66839°S, 73.22683°W, 800 m, 16.I.2018 (MACN).

Etymology. Patronym after the late Argentine arachnologist Emilio Maury, in honor of his contributions to the study of the Triaenonychidae (and Opiliones in general) of South America's Southern Cone.

Diagnosis. The prominent interocular apophysis, the carapace densely covered with rounded tubercles, the long tubercles of the mesotergum, the long drop-shaped genital operculum, the ectal-distal process of cheliceral segment II, and the hypertelic genitalia distinguish this species from all its congeners.

Distribution. Chile: Araucanía Region (Fig. 4A).

Description of male. Measurements: Total length 2.93, carapace length 0.97, dorsal scutum length 1.99, carapace max. width 1.40, mesotergum max. width 1.81. Appendage measurements: Pedipalps. Trochanter length 0.14, femora length 0.87, patella length 0.61, tibia length 0.66, tarsus length 0.56. Leg I: trochanter (tr) 0.25, femora (fe) 0.97, patella (pa) 0.42, tibia (ti) 0.73, metatarsus (mt) 0.90, tarsus (ta) 0.55. II: tr 0.29, fe 1.36, pa 0.43, ti 0.94, mt 1.55, ta 1.00. III: tr 0.28, fe 1.00, pa 0.41, ti 0.82, mt 1.24, ta 0.60. IV: tr 0.26, fe 1.33, pa 0.49, ti 1.11, mt 1.85, ta 0.72.

Dorsum (Fig. 17, 18). Eta (η) hourglass-shaped dorsal scutum. Ocularium raised, with a long backward-bending apophysis between the eyes, covered with rounded tubercles and with few setae on the apophysis. Carapace densely covered in rounded tubercles, mesotergum with areas delimited by strong tubercles. Areas I and II with straight rows of four and five setiferous tubercles,

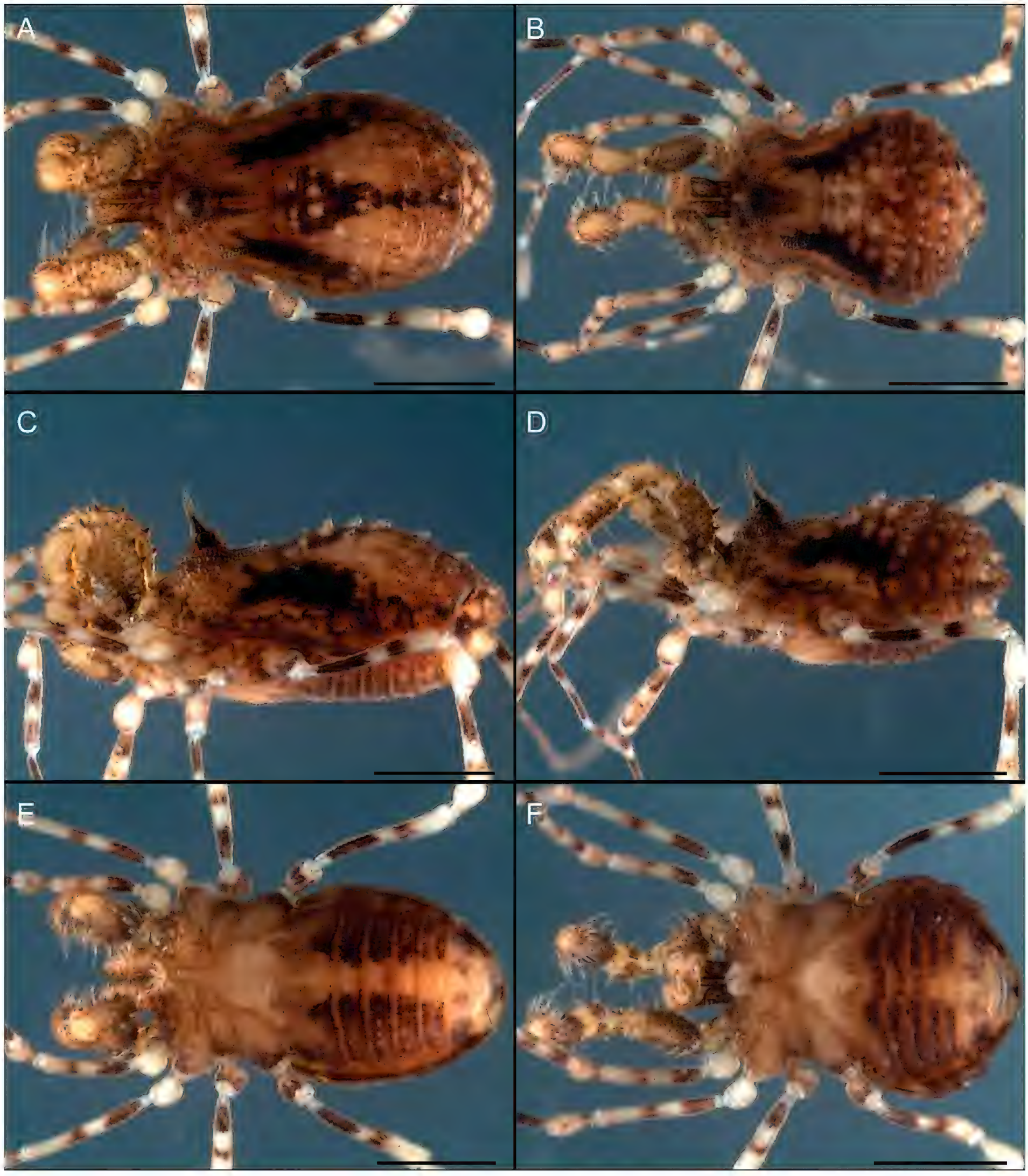

Figure 17. *Fresiax mauryi* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade A, see Fig. 3.

respectively, and III and IV with a row of eight setiferous tubercles (the two central ones are stronger than others). Posterior margin with a row of 12–14 setiferous tubercles. Free tergites with a row of setiferous tubercles similar to the posterior margin of the dorsal scutum.

Chelicerae (Fig. 19A, B). Segment I with a small, granulated area on the dorso-distal surface and two ventral granules. Segment II with an ectal-distal process that bears a few setae.

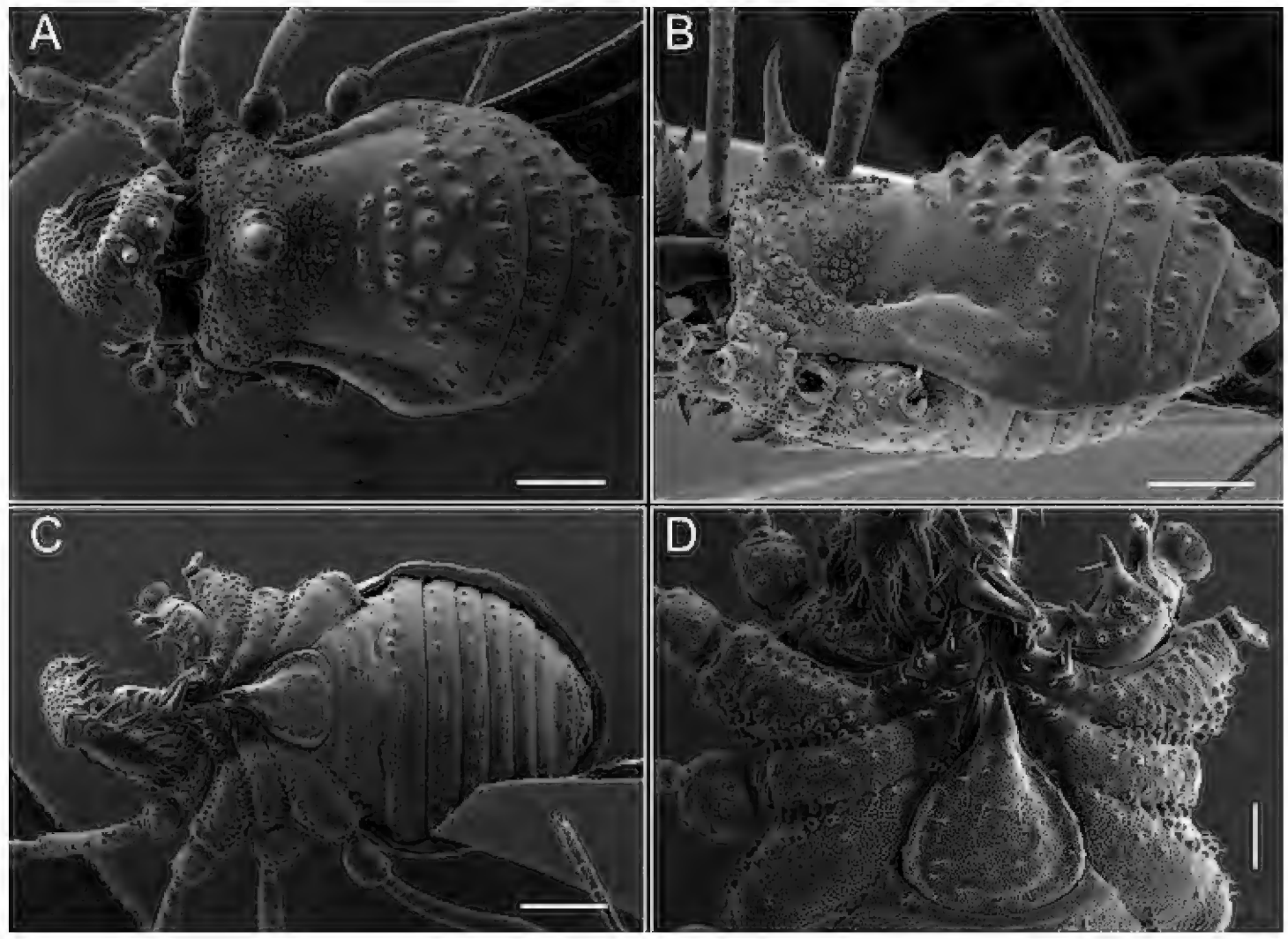

Figure 18. *Fresiax mauryi* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

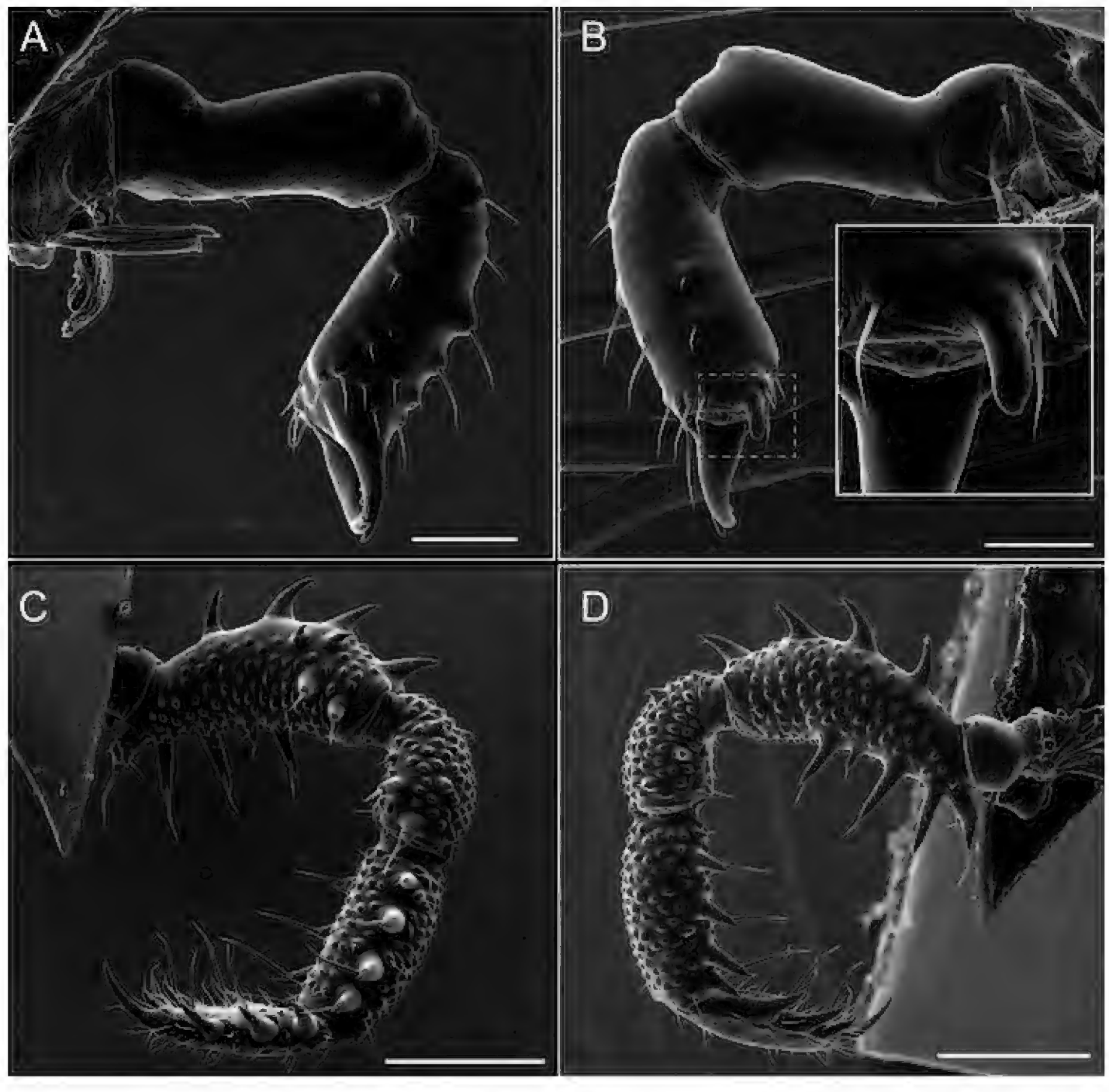

Figure 19. *Fresiax mauryi* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

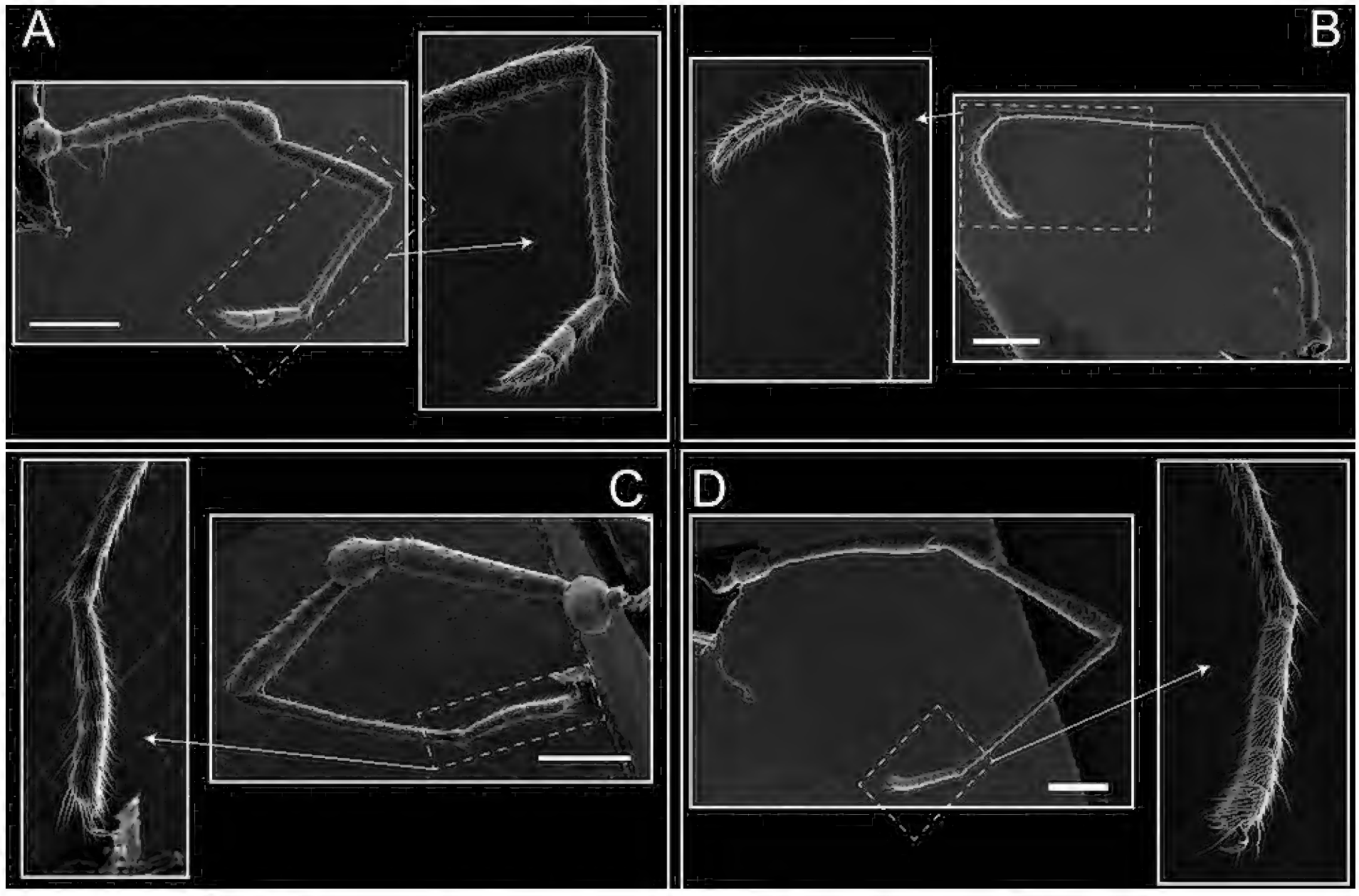

Figure 20. *Fresiax mauryi* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 µm.

Pedipalps (Fig. 19C, D). Trochanter with three small dorsal granules, and two ventral and a small dorsal tubercle. Granules cover the femora, patella, tibia, and tarsus. Femora with a row of five spines with one subdistal seta, the proximal one bifurcated. Patella with three mesal spines and one ectal spine with subdistal setae. Tibia with four ectal and mesal spines with subdistal setae. Tarsus with three ectal and mesal spines with subdistal setae.

Legs (Fig. 20). Coxae I–IV bearing small setiferous tubercles, leg I with three long subdistal setiferous tubercles, the distal one forked at its terminal end. Spiracles visible. A smooth area occupies ¼ of legs II (which has a tubercle with subdistal seta) and III. The drop-shaped genital operculum is larger than all species of the genus. Opisthosomal sternites with a row of small setiferous tubercles. Sternum reduced due to the large size of the genital operculum.

Legs I–IV covered in setae; tarsal area and calcaneus densely covered in setae. Trochanter I with a small ventral tubercle. Tibia I with three proximal tubercles with setae, II–IV with sparse ventral granules. Calcaneus smaller than astragalus, ≥ 7× smaller in legs I, 9× (II), 8× (III), and 11× (IV). Tarsal count: 3–7–4–4.

Penis (Figs 21, 22). Pars distalis has a ventral plate with a notch that divides the plate into two halves, each with six long ventral macrosetae and one dorsal macroseta, a capsula externa shorter than the capsula interna, divided into two halves, and a finger-like apical region.

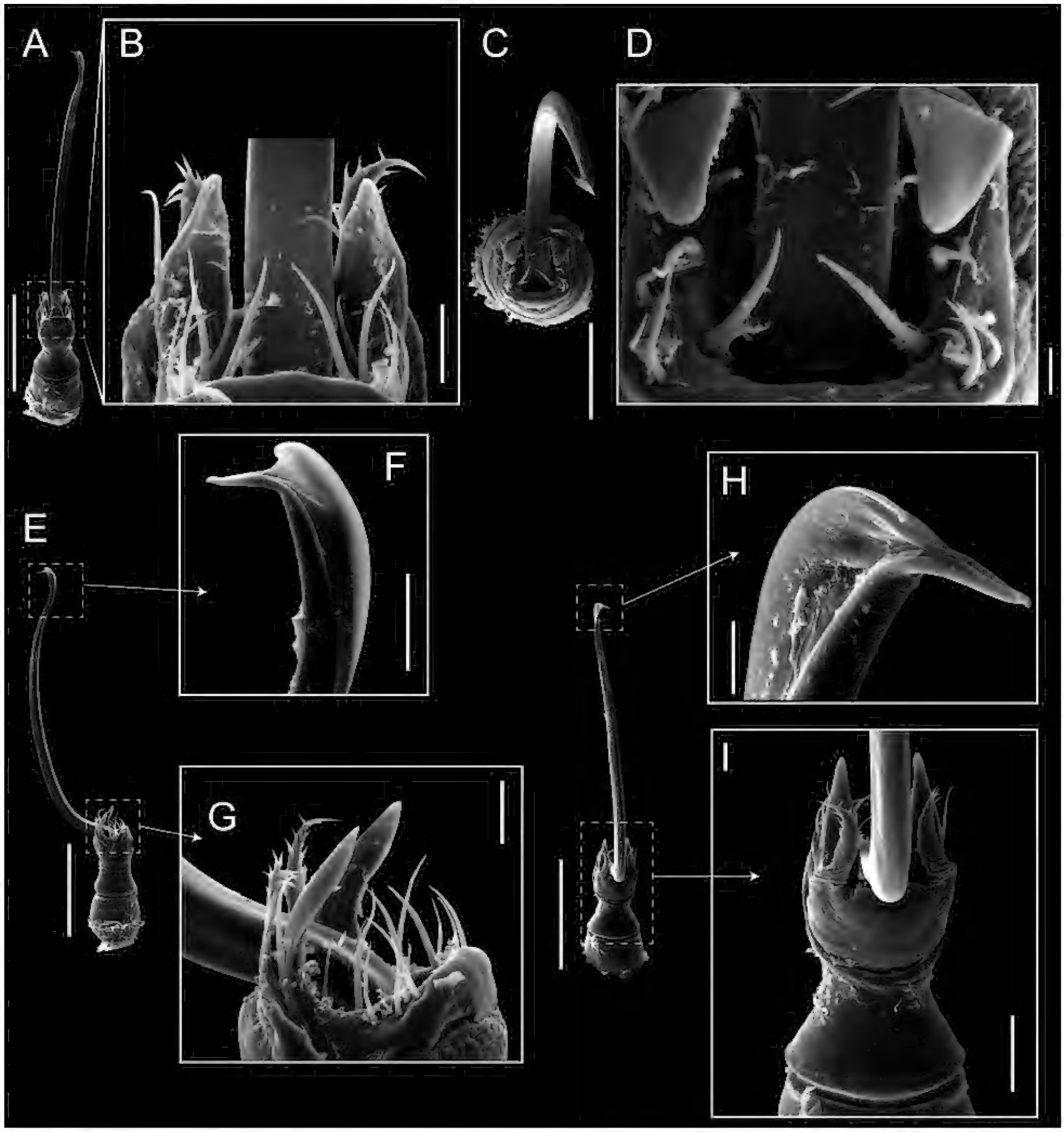

Figure 21. *Fresiax mauryi* sp. nov. penis: ventral **A, B** apical **C, D** lateral **E, G** dorsal **H, I**. Scale bars: 500 μm (**A, E**); 100 μm (**C**); 20 μm (**D, H**); 50 μm (**B, F, G**).

Female. Similar to male, with shorter pedipalpal femora and reduced genital operculum.

Female measurements. Total length 2.67, carapace length 0.80, dorsal scutum length 1.65, carapace max. width 1.25, mesotergum max. width 1.74. Appendage measurements: Pedipalps. Trochanter length 0.13, femora length 0.78, patella length 0.45, tibia length 0.56, tarsus length 0.53. Leg I: trochanter (tr) 0.19, femora (fe) 0.83, patella (pa) 0.35, tibia (ti) 0.66, metatarsus (mt) 0.80, tarsus (ta) 0.48. II: tr 0.27, fe 1.26, pa 0.43, ti 1.03, mt 1.45, ta 0.86. III: tr 0.23, fe 0.96, pa 0.38, ti 0.82, mt 1.15, ta 0.52. IV: tr 0.24, fe 1.29, pa 0.42, ti 1.04, mt 1.56, ta 0.64.

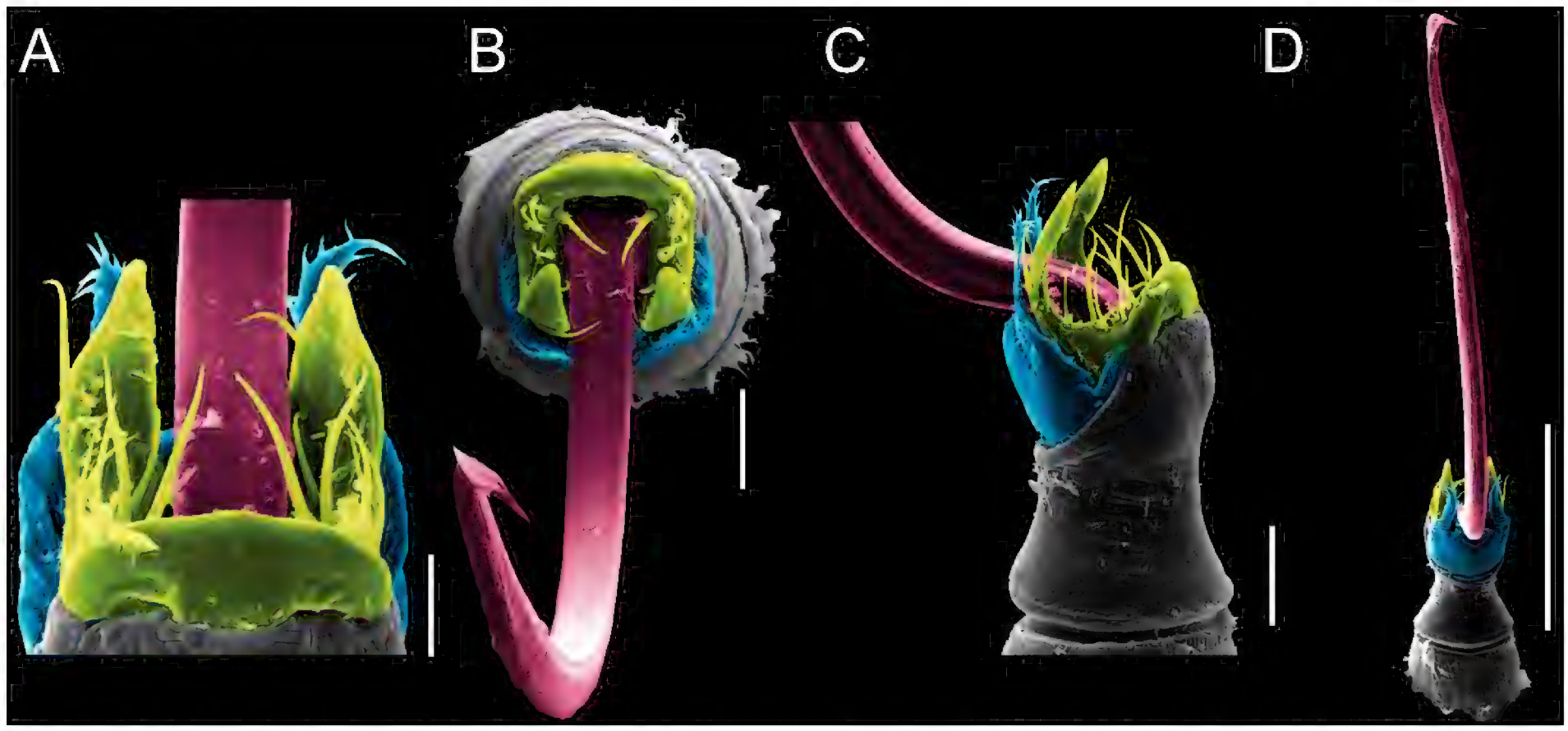

Figure 22. *Fresiax mauryi* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 µm (**A**); 100 µm (**B, C**); 500 µm (**D**).

***Fresiax pichicuy* sp. nov.**

https://zoobank.org/58DB7CF4-A314-4B5F-9BB1-E7C4AF64C4CD

Figs 23–28

Material examined. ***Holotype*.** ♂ **Chile.** Choapa: Pichidangui, Coquimbo, Fundo Palo Colorado, 16 km N of Pichidangui, E. Maury coll. 21.X.1988 (MNHNCL). ***Paratypes*.** Chile. Choapa: Pichidangui, Coquimbo, Fundo Palo Colorado, 16 km N de Pichidangui, E. Maury coll. 21.X.1988, 1 ♀ (MACN). Cuesta de Zapata, A. Porta coll., 2018, 11 imm. (MACN). Petorca: Cachagua, Quebrada El Tigre, E. Maury coll., 08.XII.1988, 5 ♂ 2 ♀ (MACN). Quillota: Parque Nacional La Campana, Palmas de Ocoa, E. Maury coll., 08.XII.1987, 2 ♀ (MACN). Petorca: Pichicuy, V región Valparaíso, Quebrada Huaquén, E. Maury coll., 29.X.1988, 2 ♂ 3 ♀ (MACN). Choapa, Los Vilos, Quebrada a Playa, Agua Dulce 46 km N de Los Vilos, E. Maury coll., 05.XII.1988, 1 ♀ (MACN). Quillota: Parque Nacional La Campana, Palmas de Ocoa, E. Maury coll., 27.X.1988, 2 ♂ 2 ♀ (MACN). Coquimbo: Limarí, Bosque Talinay, P.N. Fray Jorge, relict Valdivian fog forest, R. Schuh, N. Platnick coll., 08.II.1986, 2 ♂ (AMNH). Petorca: Pichicuy, Quebrada con Peumusboldus, A. Roig coll., 07.I.1984, 1 ♂ (MACN). Valparaíso, Cerro de La Campana, G. Betancourt coll., 12.III.1979, 1 ♀. Coquimbo: Limarí, P.N. Fray Jorge, relict Valdivian fog forest, N. Platnick, K. Catley, M. Ramírez, T. Allen coll., 10.XI.1993, 1 ♂ (AMNH). Petorca: Cachagua, V región Valparaíso, Quebrada El Tigre, E. Maury coll., 14.XII.1987, 7 imm. (MACN).

Etymology. The species name derives from the species' distribution locality, Pichicuy, located in the commune of La Ligua, Petorca province, Chile. Noun in apposition.

Diagnosis. This species can be easily distinguished from the other species in the genus by its conical forward-facing ocularium, with a 45 ° angled process. Dorsal scutum only covered in small granules. Capsula interna with digitiform structures on the apical portion. Genitalia similar to that of *F. fray*, slightly longer and with variations in the surface of the ventral plate and apex of the capsula interna with longer projections.

Figure 23. *Fresiax pichicuy* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade A, see Fig. 3.

Distribution. Chile: Valparaíso Region, Petorca Province (Fig. 4A).

Description of male. Measurements: Total length 2.01, carapace length 0.64, dorsal scutum length 1.37, carapace max. width 1.03, mesotergum max. width 1.42. Appendage measurements: Pedipalps. Trochanter length 0.17, femora length 0.76, patella length 0.44, tibia length 0.67, tarsus length 0.54. Leg I: trochanter (tr) 0.16, femora (fe) 0.75, patella (pa) 0.36, tibia (ti) 0.51, metatarsus (mt) 0.54, tarsus (ta) 0.55. II: tr 0.19, fe 0.94, pa 0.39, ti 0.79, mt 0.87, ta 1.11.

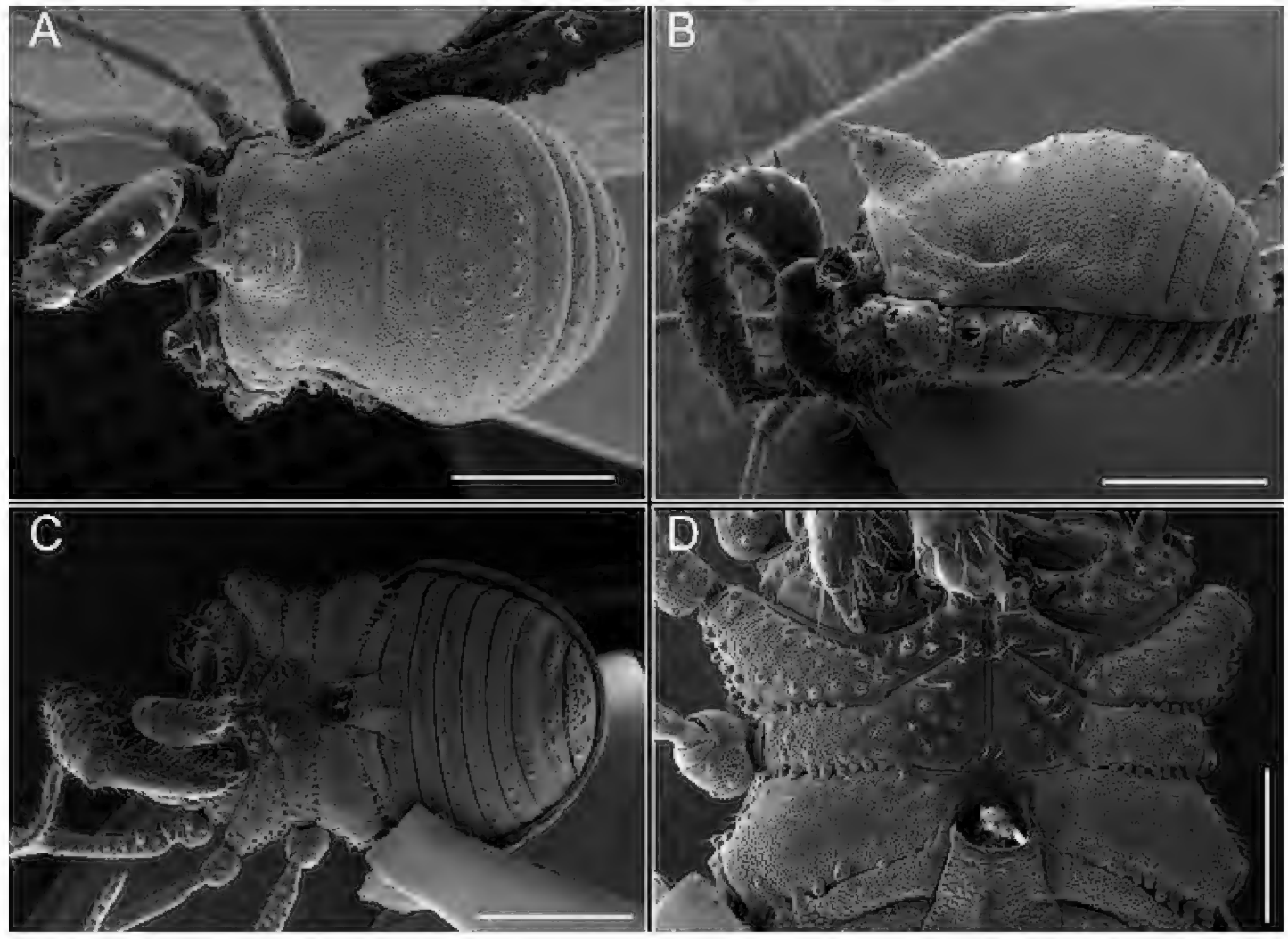

Figure 24. *Fresiax pichicuy* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 µm (**D**).

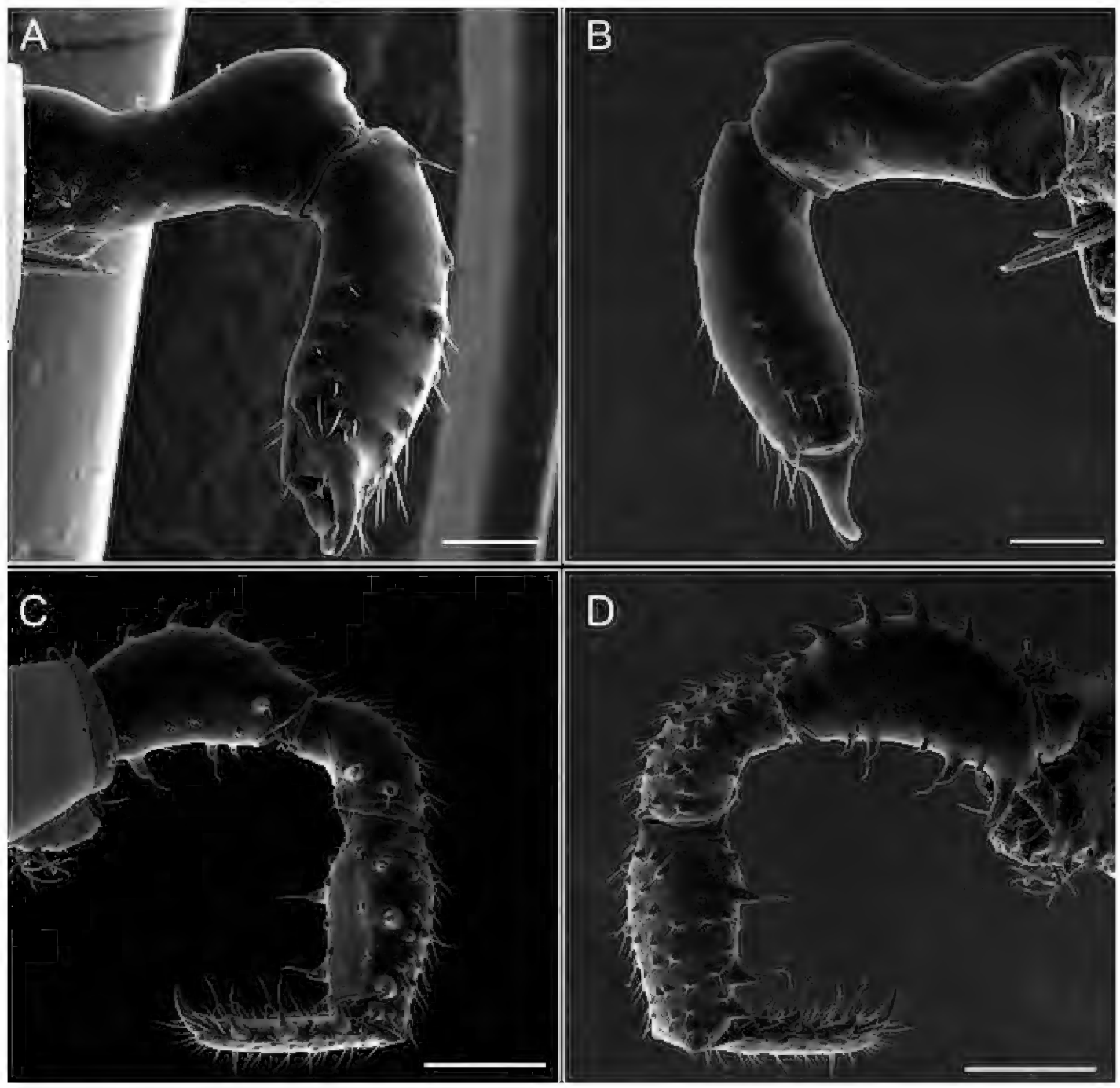

Figure 25. *Fresiax pichicuy* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm (**A, B**); 500 µm (**C, D**).

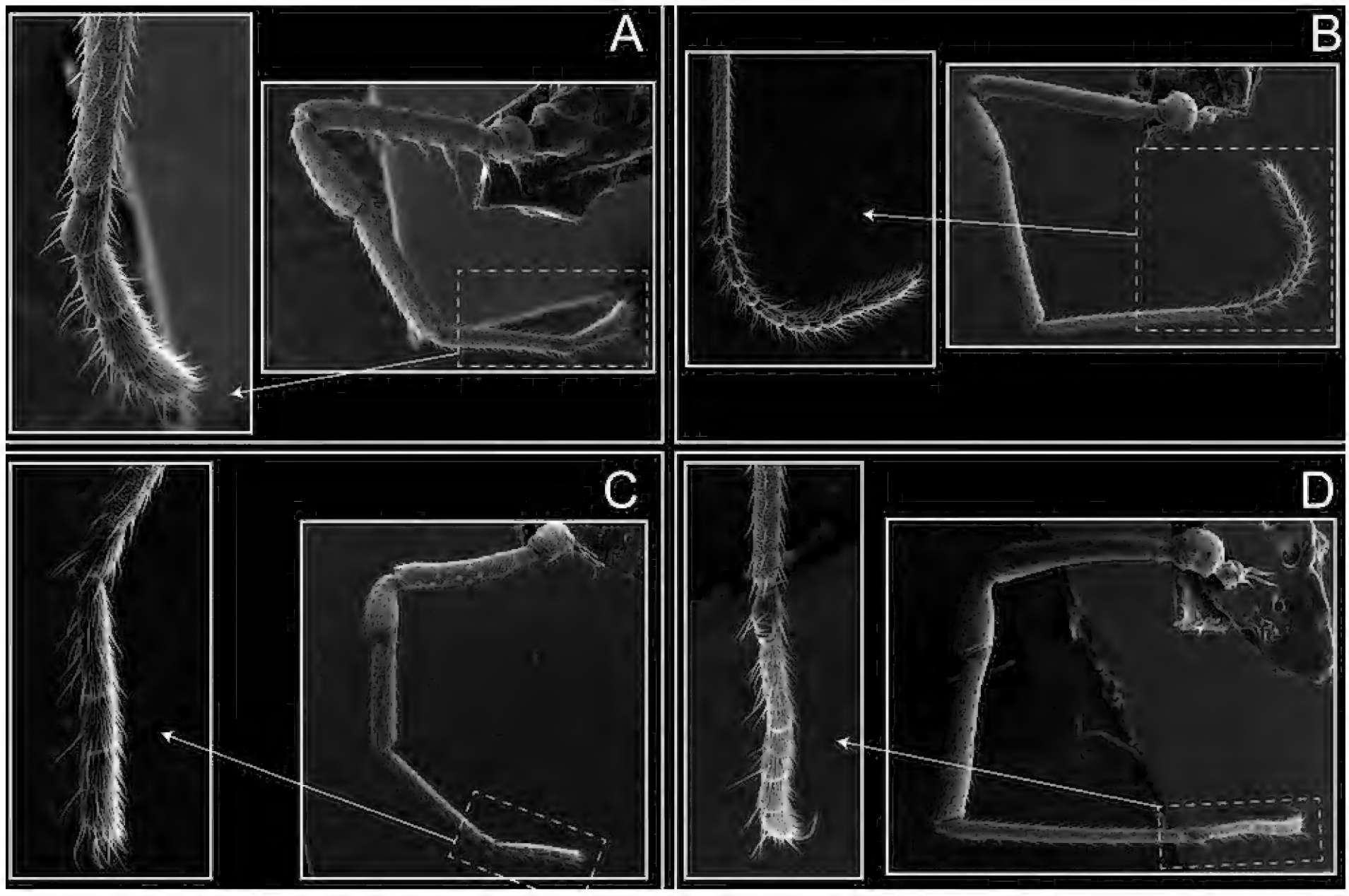

Figure 26. *Fresiax pichicuy* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm (**A, C**); 500 µm (**B, D**).

III: tr 0.24, fe 0.72, pa 0.26, ti 0.34, mt 0.65, ta 0.62. IV: tr 0.18, fe 0.99, pa 0.43, ti 0.82, mt 1.03, ta 0.71.

Dorsum (Fig. 23, 24). Eta (η) hourglass-shaped dorsal scutum. Conical ocularium, forward-looking, with a small forward-pointing apical spine and two dorsal rows of small setiferous tubercles. Eyes located high. Dorsal scutum microgranulate, without clear delimitation of areas. Areas I–IV with four, six, eight, and ~ 17 small rounded setiferous tubercles with setae, respectively. Posterior border and free tergites with a row of small rounded setiferous tubercles. All free tergites with a row of small setiferous granules.

Chelicerae (Fig. 25A, B). Segment I smooth; segment II with setae and sparse granules.

Pedipalps (Fig. 25C, D). Trochanter smooth. Femora with a row of six dorsal spines with subdistal setae, a row of four ventral spines with setae interspersed by small tubercles with subdistal setae, the proximal one subtriangular in shape, a row of four small mesal granules with setae, and a small distal tubercle with mushroom-shaped tubercles. Patella covered in small tubercles with setae on the dorsal surface, with two small mesal setiferous tubercles. Tibia with four ectal and mesal spines with subdistal setae, nine ventral granules with setae, and dorsal surface covered in small tubercles with setae. Tarsus with three mesal and ectal spines, as well as a few setae and granules.

Legs (Fig. 26). Coxa I with small setiferous tubercles and a row of three long tubercles with subdistal setae, coxae II–IV microgranulate, bearing five or six bridges between legs II and III, eight between III and IV, 6–8 between leg IV

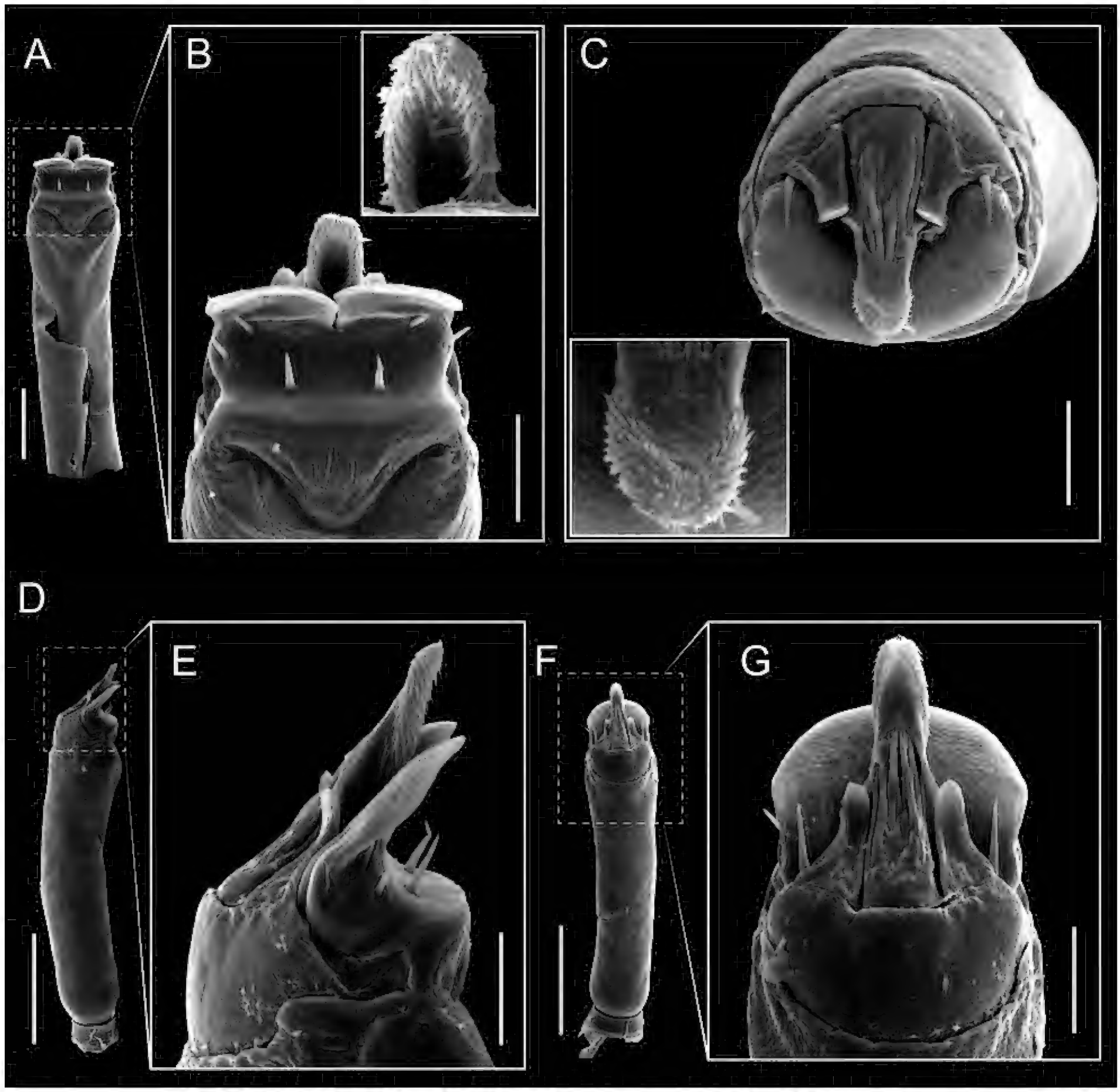

Figure 27. *Fresiax pichicuy* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 50 μm (**B, C, E, G**).

and opisthosoma. Spiracles not visible. Smooth area occupies ⅓ of leg II, almost ½ of III, and only a small proximal portion of IV. Smooth area II with five small setiferous tubercles, III with eight small setiferous tubercles. Opisthosomal sternites III with four small setiferous tubercles on each side, IV with three small setiferous tubercles on each side, and V with an anterior row of small setiferous tubercles and a posterior row of rounded setiferous tubercles. Anal plate covered in small setiferous tubercles. Trochanter I with three small ventral and one dorsal setiferous tubercle; tibia I with a row of five tubercles with setae and a dorsal row of small setiferous tubercles; femora III with ~ 20 small setiferous tubercles. Legs II–IV covered in setae, tarsal area, and calcaneus densely setose. Calcaneus smaller than astragalus, ≥ 5× smaller in legs I, 6× (II), 7× (III) and 10× (IV). Tarsal count 3–9–4–4.

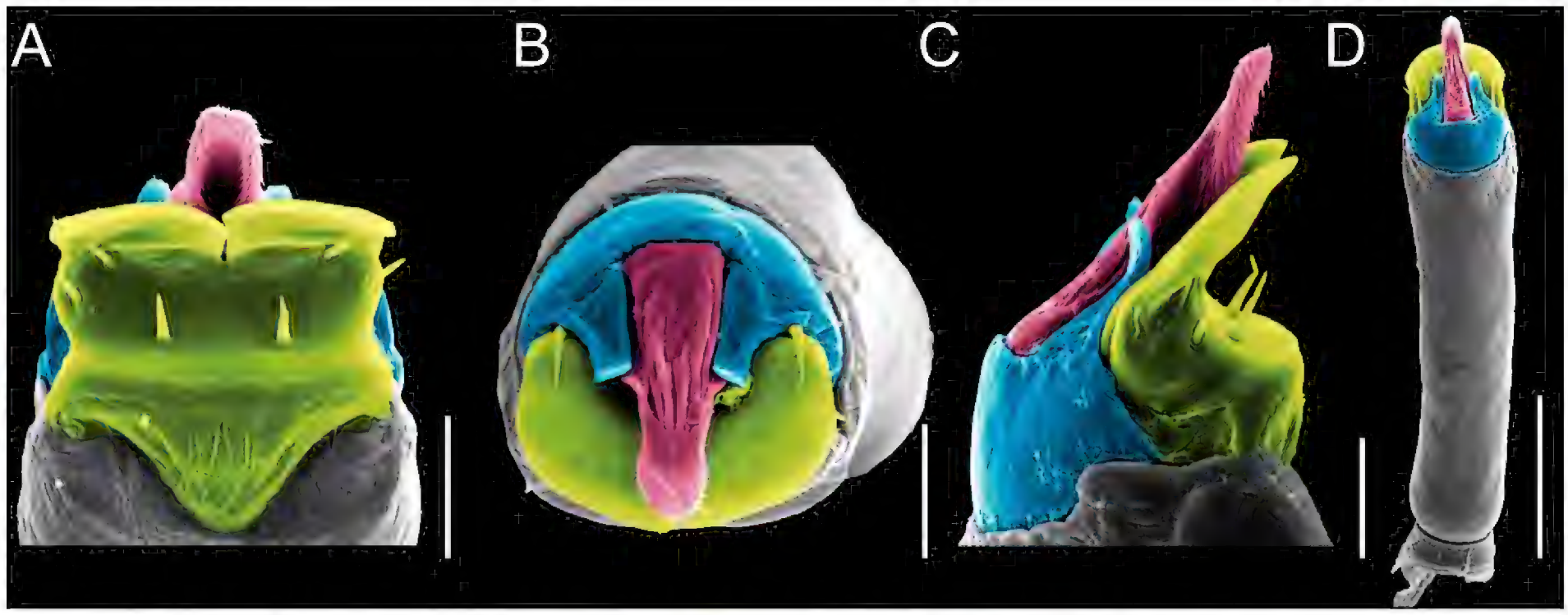

Figure 28. *Fresiax pichicuy* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm.

Penis (Figs 27, 28). Pars distalis with a ventral plate bearing a cleft dividing the plate into two halves. Ventral surface of each half with three macrosetae and dorsal surface with one macroseta; ventral plate covered in scale-like structures. Capsula externa shorter than capsula interna, having a notch that divides the capsula externa into two halves.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 1.93, carapace length 0.60, dorsal scutum length 1.34, carapace max. width 1.07, mesotergum max. width 1.45. Appendage measurements: Pedipalps. Trochanter length 0.15. Femora length 0.65, patella length 0.34, tibia length 0.53, tarsus length 0.49. Leg I: trochanter (tr) 0.15, femora (fe) 0.62, patella (pa) 0.34, tibia (ti) 0.51, metatarsus (mt) 0.53, tarsus (ta) 0.50. II: tr 0.18, fe 0.79, pa 0.37, ti 0.70, mt 0.81, ta 1.03. III: tr 0.18, fe 0.68, pa 0.31, ti 0.57, mt 0.67, ta 0.49. IV: tr 0.20, fe 0.94, pa 0.36, ti 0.72, mt 0.87, ta 0.62.

Fresiax spinulosa (Maury, 1990), comb. nov.

Figs 29–34

Nuncia spinulosa Maury, 1990: 108, figs 13–24; Maury 1992: 5; Acosta and Maury 1998: 579; Kury 2003: 22.

Material examined. ***Holotype*.** ♂ **Argentina.** Neuquén Province, Hua Hum, E. Maury coll. (MACN 8689). ***Paratype* (allotype ♀). Argentina.** Neuquén Province, Hua Hum, E. Maury coll. (MACN 8690). ***Paratypes*. Argentina.** Tromen Lake, Neuquén Province, 3 ♂ and 4 ♀ (MACN 8691).

Additional material. Argentina. Neuquén: Parque Nacional Nahuel Huapi, Lago Ortiz Basualdo, M. Ramírez coll., I.1990, 2 ♀ 1 imm. (MACN). Río Negro: Parque Nacional Nahuel Huapi, Río Frías Superior, M. Ramírez coll., I.1990, 1 ♀ (MACN), D. Anghicante. coll., 26.01.1990, 1 ♀ 1 imm. Río Negro: P.N. Nahuel Huapi, Puerto Blest, M. Ramírez V. Werenkraut, S. Aysén coll., 28.XII.2010, 1 ♂ 2 ♀, Near Puerto Alegre, Lago Frías, M. Ramírez, V. Werenk-

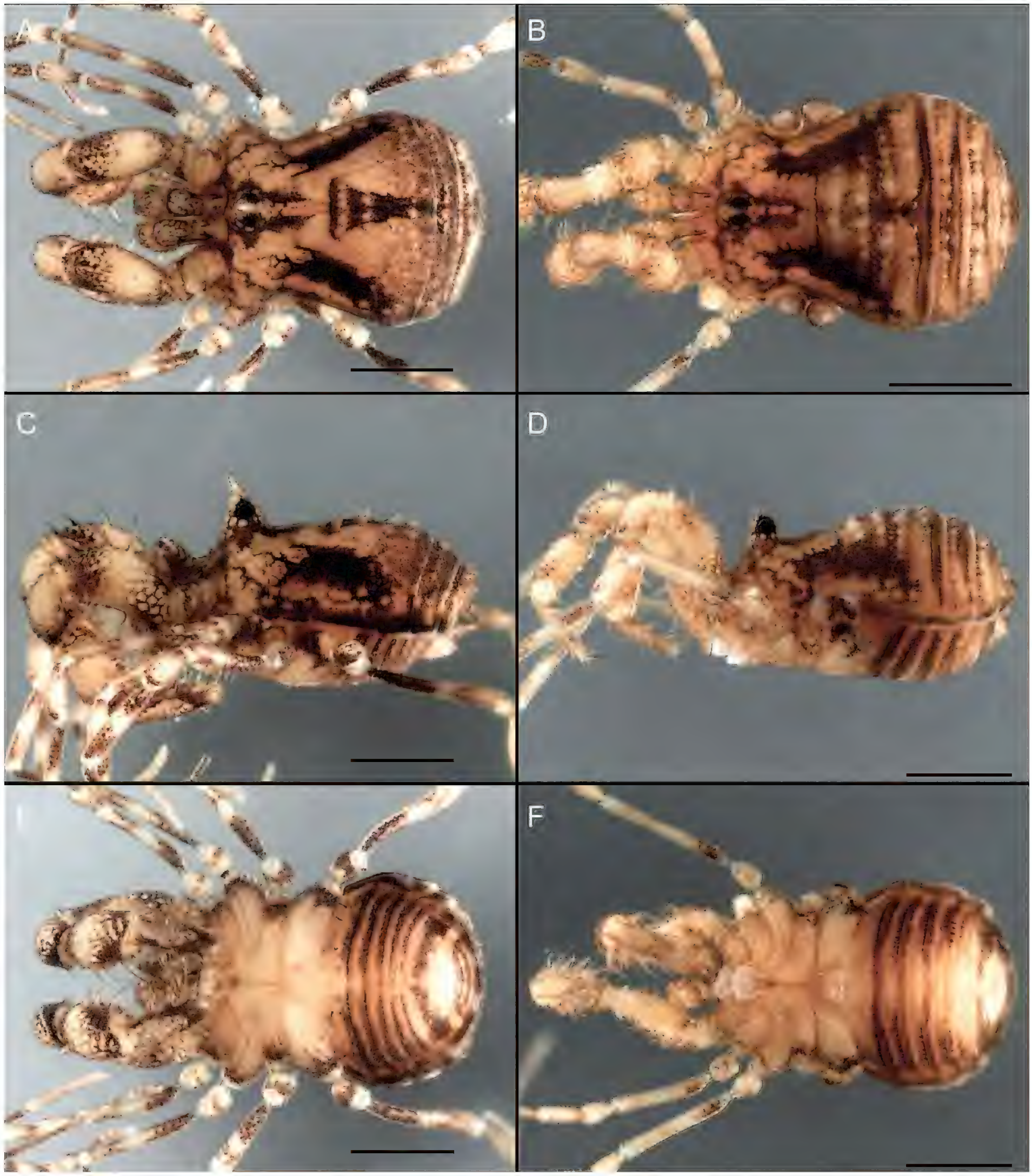

Figure 29. *Fresiax spinulosa* comb. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade A, see Fig. 3.

raut, S. Aysén coll., 29.XII.2010, 1 ♂, A. Quaglino, L. Lopardo coll., 07.I.2000, 1 ♀. Neuquén: P.N. Nahuel Huapi, Puerto Blest, M. Ramírez coll., 05.I.1998, 1 ♀ (MACN). Río Negro: Bariloche, Lago Mascardi, Near Tronador Hotel, E. Maury coll., 02.XI.1986, 1 ♂ 2 imm. (MACN). Neuquén: Parque Nacional Nahuel Huapi, Los Lagos, M. Ramírez coll., 30. I.1985, 1 ♀ (MACN), Base Glaciar Frias, D. Anghicante coll., 24.I.1988, 1 ♂ 1 ♀. Chile. Valdivia: Res. Valdivia, B. Borry coll., I.2007, 4 imm. Cautín: M. Ramírez, F. Labarque coll., 08.II.2005, 1

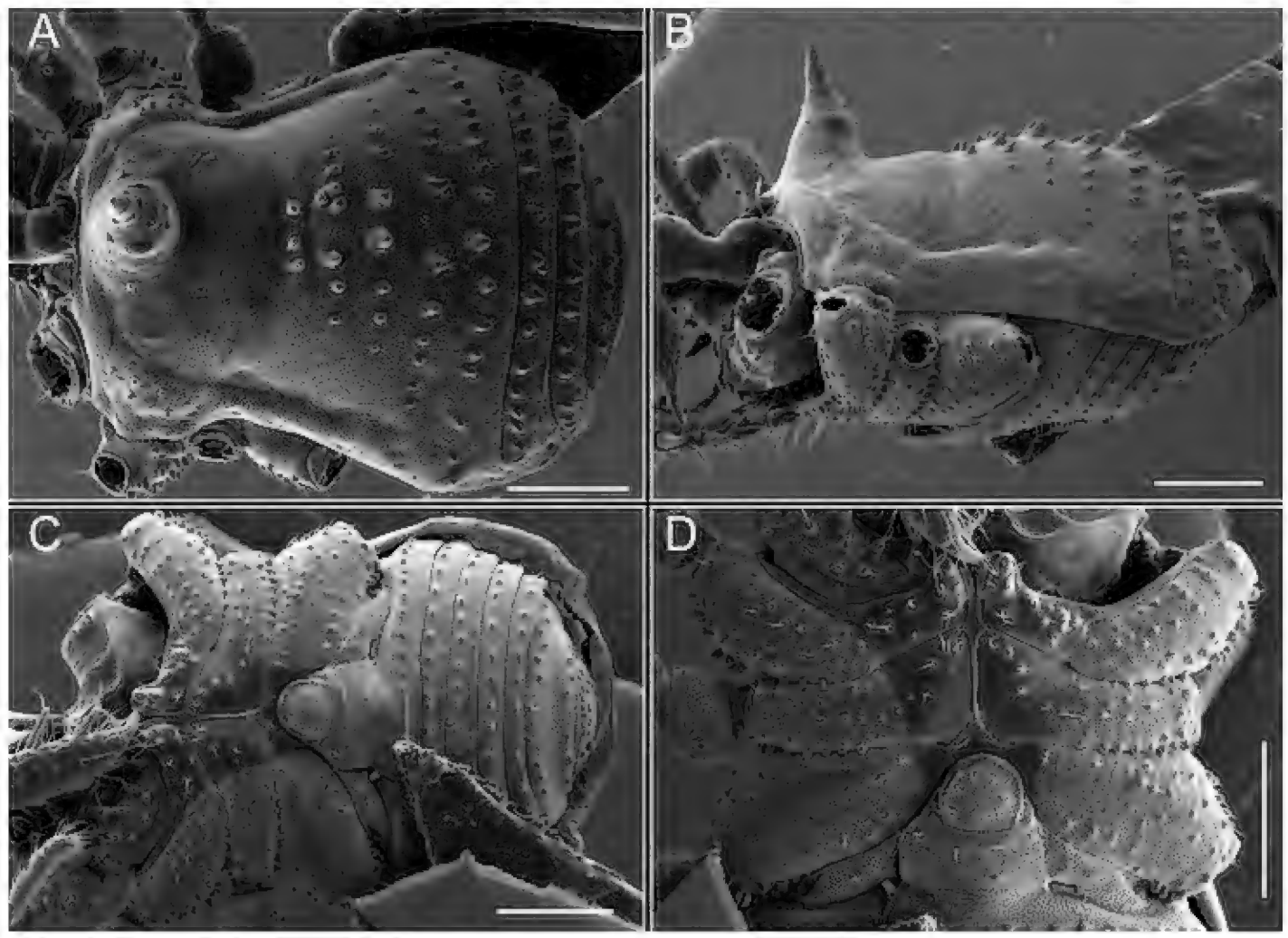

Figure 30. *Fresiax spinulosa* comb. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

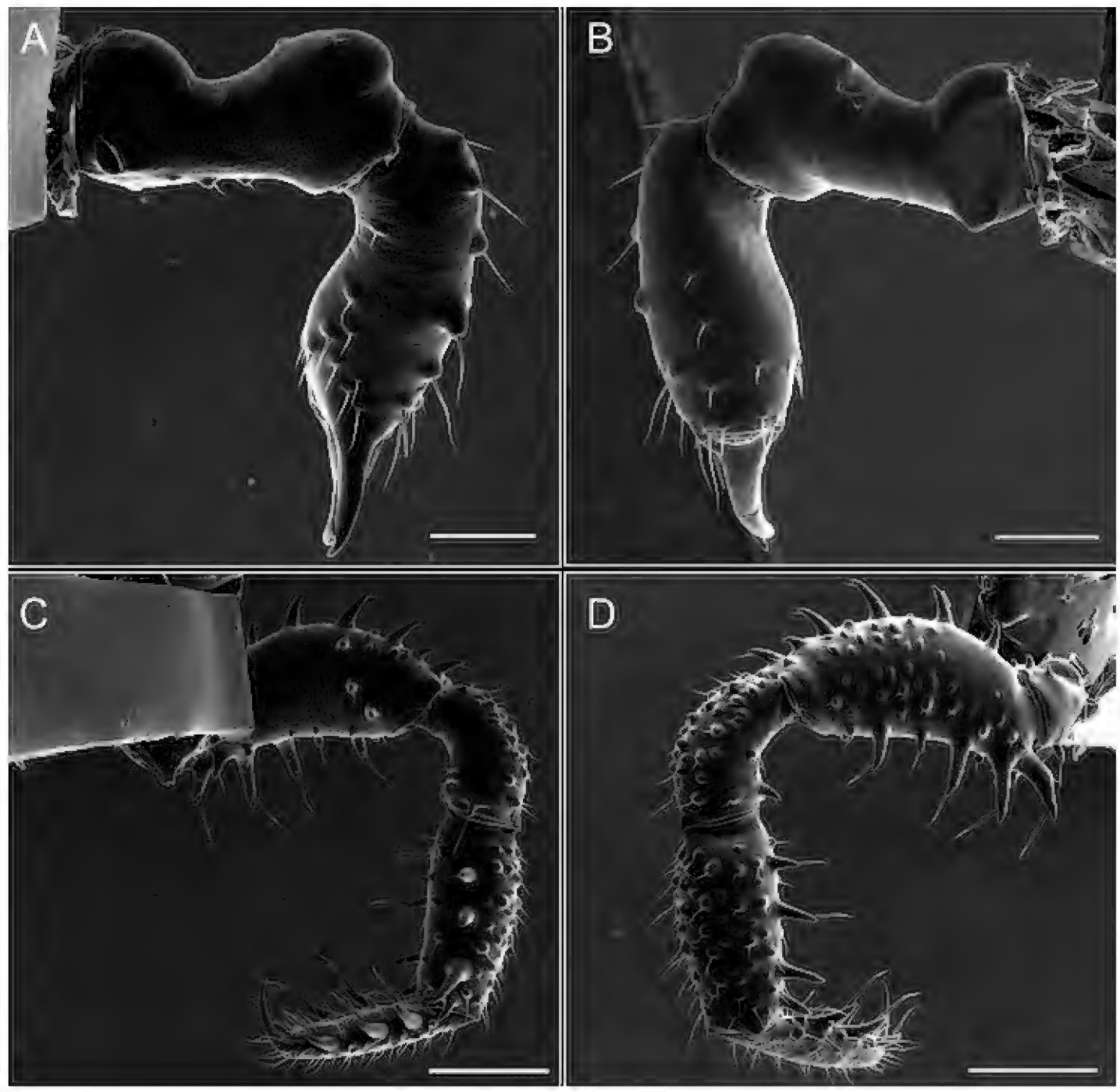

Figure 31. *Fresiax spinulosa* comb. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

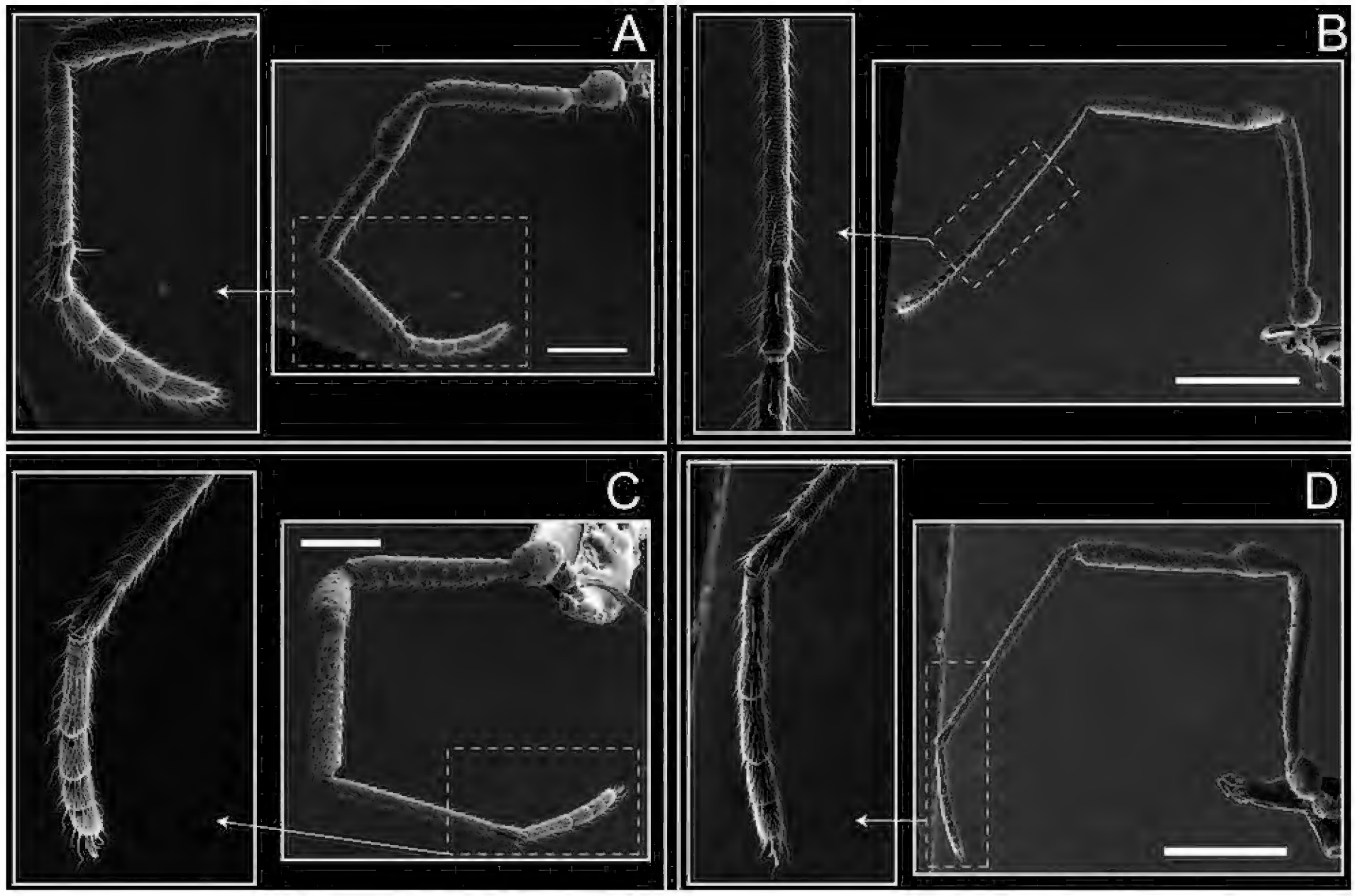

Figure 32. *Fresiax spinulosa* comb. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 µm (**A, C**); 100 µm (**B, D**).

♂ 1 imm. (MACN); Bellavista, Fundo Flor del Lago, M. Ramírez, F. Labarque coll., 09.II.2005, 1 ♀ (MACN). Osorno: Termas de Puyehue, R. Schuh, N. Platnick coll., 24–25.XI.1981, 4 ♂ 1 ♀ (AMNH), 36 km W. La Union, L. Peña coll., 25.III.1987, 2 ♂ (AMNH). Valdivia: Nehuin, X Reg. Los Lagos, E. Maury coll., 16.I.1989, 1 ♂ 1 ♀ 1 imm. (MACN). Chiloé: Chiloé island, 5 km N of Quellón, R. Schuh, N. Platnick coll., 01.XII.1981, 1 ♂ (AMNH). Osorno: 7 km E de Entrelagos, Camping “No me olvides”, E. Maury coll., 30.I.1991, 1 ♂ 1 imm. (MACN). Llanquihue: P.N. Alerce Andino, M. Ramírez, F. Labarque coll., 02.IV.2005, 2 ♂ (MACN). Valdivia: Corral, X Reg. Los Lagos, Río Nahuelan 24 km E Corral, E. Maury coll., 16.I.1989, 1 ♂ 1 ♀ (MACN). Chiloé: 25 km N de Chepu, M. Ramírez coll., 08.II.1991, 1 ♀ (MACN). Valdivia: Niebla, Camping “La Herradura”, 8 km east form Niebla, E. Maury coll., 23.I.1991, 1 ♂ 2 ♀ 1 imm. (MACN). Concepción: Hualpén, Estación de Biología terrestre Univ. de Concepción, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 14.I.2018, 1 ♂ (MACN). Valdivia: Parque Oncol, Sendero Punucahua, M. Ramírez, E. Soto, J. Wilson, D. Poy coll., 13.I.2020, 1 ♀ (MACN). Concepción: Hualpén, Estación de Biología terrestre Univ. de Concepción, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 14.I.2018, 1 ♂ 1 ♀ (MACN). Valdivia: Res. Valdivia, B. Borry coll., I.2007, 1 imm. Cautín: Pucón, Ojos del Caburgua, 15 km NE de Pucón, E. Maury coll., 16.I.1987, 1 ♂ 2 ♀ 3 imm. (MACN), Termas de Palguin, SE de Pucón, E. Maury coll., 17.I.1987, 1 ♀ (MACN). Chiloé: Chepu, E. Maury coll., 11.XII.1985, 1 ♂ (MACN). Malleco: Malalcahuello, E. Maury coll., 08.01.1987, 3 ♂ 1 ♀ (MACN). Chiloé: Cucao, E. Maury coll., 12.XII.1985, 2 ♂ 1 ♀ (MACN). Llanquihue: Puerto Montt, Carretera Austral, Caleta La Arena, E.

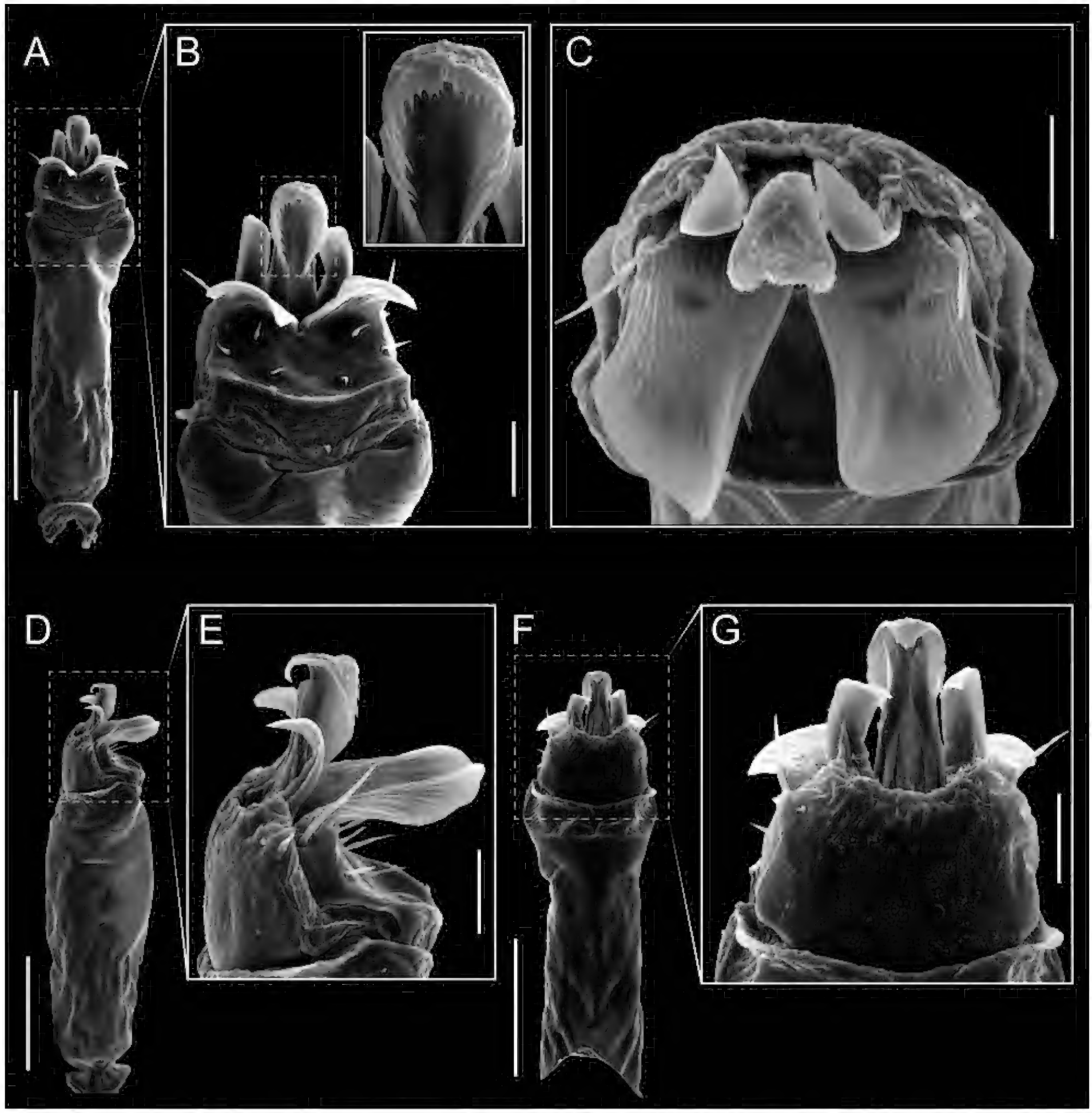

Figure 33. *Fresiax spinulosa* comb. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, E, G**).

Maury coll., 07.VIII.1985, 3 ♂ 3 ♀ (MACN). Osorno: Los Derrumbes, 5 km al S de Termas Puyehue, E. Maury coll., 03.I.1988, 1 ♀ (MACN). Same collector, 04.XII.1985, 5 ♂ 5 ♀ 8 imm. (MACN), 36 km W. La Union, 600 m, L. Peña coll., 25–28.III.1987, 1 ♂ (AMNH). Valdivia: Las Lajas (Las Trancas), W. La Unión, L. Peña coll., 19.XI.1990, 1 ♂ (AMNH).

Diagnosis. This species can be easily distinguished from the other species in the genus by its long interocular apophysis (not as long as in *F. mauryi*), the long mesotergal tubercles, and the penis with longer ventral plate than other species in the genus.

Distribution. Argentina: Provinces of Neuquén and Río Negro. Chile: Regions of Araucanía, Los Ríos, and Los Lagos (Fig. 4A).

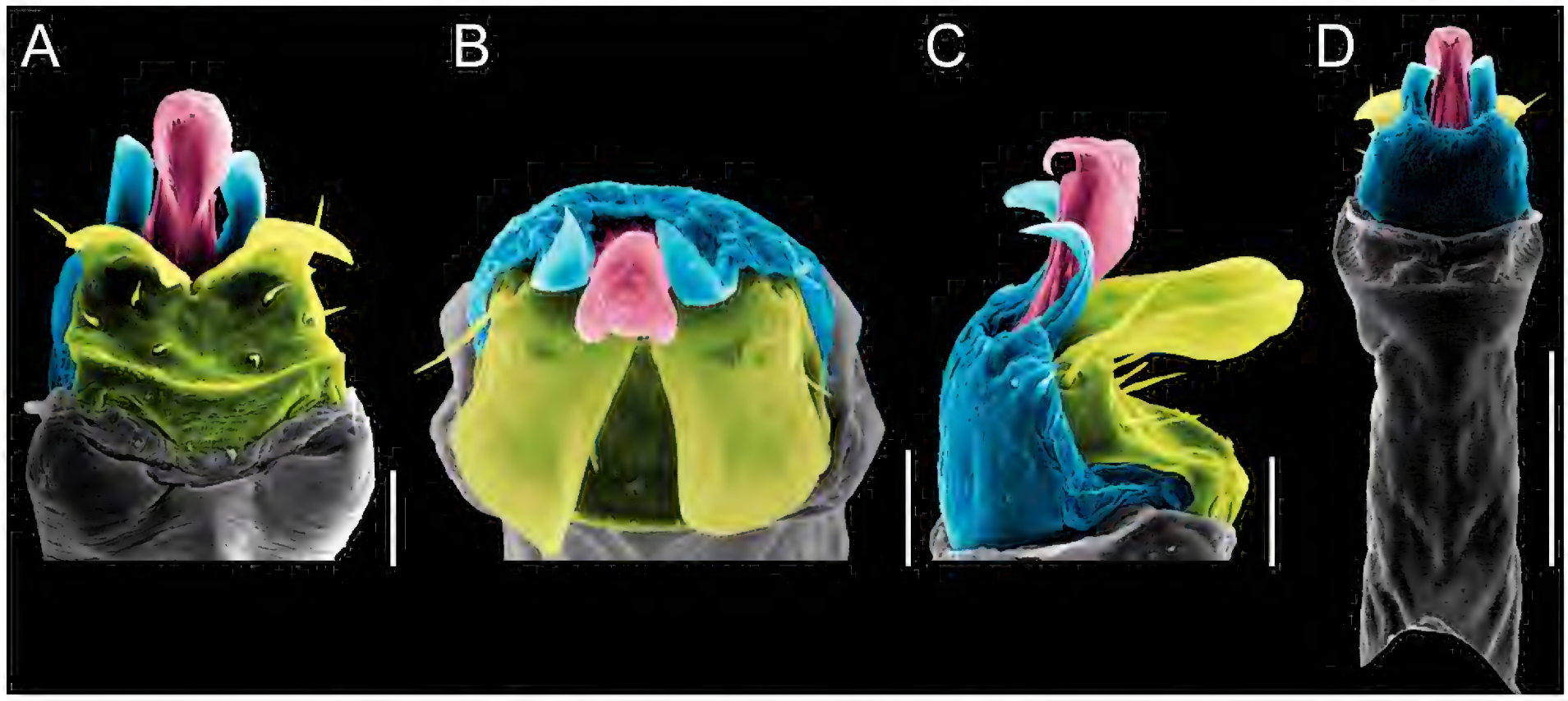

Figure 34. *Fresiax spinulosa* comb. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm (**A–C**); 200 μm (**D**).

Description of male. Measurements: Total length 3.29, carapace length 0.77, dorsal scutum 2.22 length. max. width of the carapace 1.72. max. width of the mesotergum 2.01. Appendage measurements: Pedipalps. Trochanter length 0.28, femora length 1.27, patella length 0.64, tibia length 1.05, tarsus length 0.95. Leg I: trochanter (tr) 0.30, femora (fe) 1.13, patella (pa) 0.58, tibia (ti) 0.92, metatarsus (mt) 1.03, tarsus (ta) 0.76. II: tr 0.34, fe 1.71, pa 0.63, ti 1.47, mt 1.75, ta 1.55. III: tr 0.36, fe 1.17, pa 0.51, ti 1.13, mt 1.44, ta 0.97. IV: tr 0.41, fe 1.56, pa 0.71, ti 1.47, mt 1.98, ta 1.10.

Dorsum (Fig. 29, 30). Eta (η) hourglass-shaped dorsal scutum. Ocularium elevated, accompanied by a long apophysis located between the eyes. Additionally, there are two dorsal rows of setae present in the ocularium. Carapace with fine microgranulation, small tubercles located on each side of the ocular region. A group of five small tubercles can be observed near leg I. Mesotergum with fine microgranulation and features areas that are delineated by prominent tubercles. These tubercles create triangular patterns on the dorsal surface of the mesotergum. Areas I–IV with rows of three, nine, ten, and 12 setiferous tubercles, respectively. The two central tubercles of rows II and III more robust than the others. Posterior margin of the mesotergum with a row of 16 setiferous tubercles. Free tergites, similarly to the posterior margin of the dorsal scutum, display a row of setiferous tubercles.

Chelicerae (Fig. 31A, B). Segment I with two ventral granules and a tiny granule on the dorso-distal surface. Segment two with small granules.

Pedipalps (Fig. 31C, D). The pedipalps exhibit several distinctive features. Trochanter of the pedipalp possesses one ventral and three small dorsal setiferous tubercles. Femora and tibia covered with granules, visible in both dorsal and ectal views. Femora of the pedipalp particularly notable, with a series of six ventral spines with subdistal setae. Proximal process subtriangular in shape, while the fourth and sixth spines are smaller compared to the others. On the mesal surface of the femora, a row of small tubercles of varying sizes can be observed. Additionally, three small distal tubercles with setae and 6–8 granules

are present. Dorsal surface of the femora with a row of six spines with subdistal setae. Patella with two mesal and one ectal small spines, each adorned with subdistal setae. In ventral view, tibia displays four ectal and mesal spines with subdistal setae, with a row of setiferous granules. Tarsus with three mesal and ectal tubercles, all covered in subdistal setae.

Legs (Fig. 32). Legs I to IV characterized by short setiferous tubercles. Leg I with three long tubercles with subdistal setae. Legs II and III are connected by four or five bridges, while leg IV is connected to the opisthosoma by 6–8 bridges. Spiracles not covered by these bridges. The smooth surface occupies < ¼ of leg IV, indicating the presence of microgranulation or other textural variations. Legs II and III each with ~ ⅓ of their surfaces covered in a row of four small tubercles. Leg II with seven small tubercles. On the opisthosomal sternites, a row of tiny setiferous tubercles can be observed. Sternum arrow-shaped, with a triangular-shaped posterior. Femora I–IV bearing small setiferous tubercles, metatarsus I with a distal notch.

Penis (Figs 33, 34). Pars distalis with a ventral plate that bears a groove dividing it into two long lamellae. Each lamella has three small macrosetae on the ventral surface and one macroseta on the dorsal surface, and the ventral plate is composed of scale-like structures. Capsula externa shorter than capsula interna, with a groove dividing the dorsal fold into two halves. Capsula interna with apical projections on the ventral view.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 3.10, carapace length 0.94, dorsal scutum length 2.00, carapace max. width 1.48, mesotergum max. width 1.95. Appendage measurements: Pedipalps. Trochanter length 0.21, femora length 1.00, patella length 0.61, tibia length 0.74, tarsus length 0.80. Leg I: trochanter (tr) 0.28, femora (fe) 1.02, patella (pa) 0.48, tibia (ti) 0.84, metatarsus (mt) 0.95, tarsus (ta) 0.68. II: tr 0.34, fe 1.55, pa 0.59, ti 1.37, mt 1.54, ta 1.34. III: tr 0.31, fe 1.16, pa 0.48, ti 0.93, mt 1.26, ta 0.78. IV: tr 0.38, fe 1.42, pa 0.61, ti 1.31, mt 1.79, ta 1.02.

Clade B

Genus *Mistralia* gen. nov.

https://zoobank.org/B295CFCF-0BC2-4562-B880-C549E61289C7

Figs 35–43

Nuncia [part] (only references to *Nuncia verrucosa*): Maury 1990: 106; Maury 1992: 5; Acosta and Maury 1998: 579; Kury 2003: 22.

Etymology. The generic epithet is a reference to the Chilean poet, diplomat, and educator Gabriela Mistral (1889–1957). Feminine grammatical gender.

Diagnosis. It differs from all other genera in Triaenonychidae by the morphology of the male genitalia, where the capsula interna features a lateral plate formed by a projection of the pars basalis onto the pars distalis. The dorsal scutum is covered in sharp tubercles (*M. ramirezi* sp. nov.) or wart-shaped (*M. verrucosa*). Ocularium with an apical apophysis.

Type species. *Nuncia verrucosa* Maury, 1990

Included species. *Mistralia ramirezi* sp. nov., *Mistralia verrucosa* comb. nov.

Distribution. Argentina: Neuquén, Río Negro. Chile, Regions: Bío-Bío, Los Lagos (Fig. 4B).

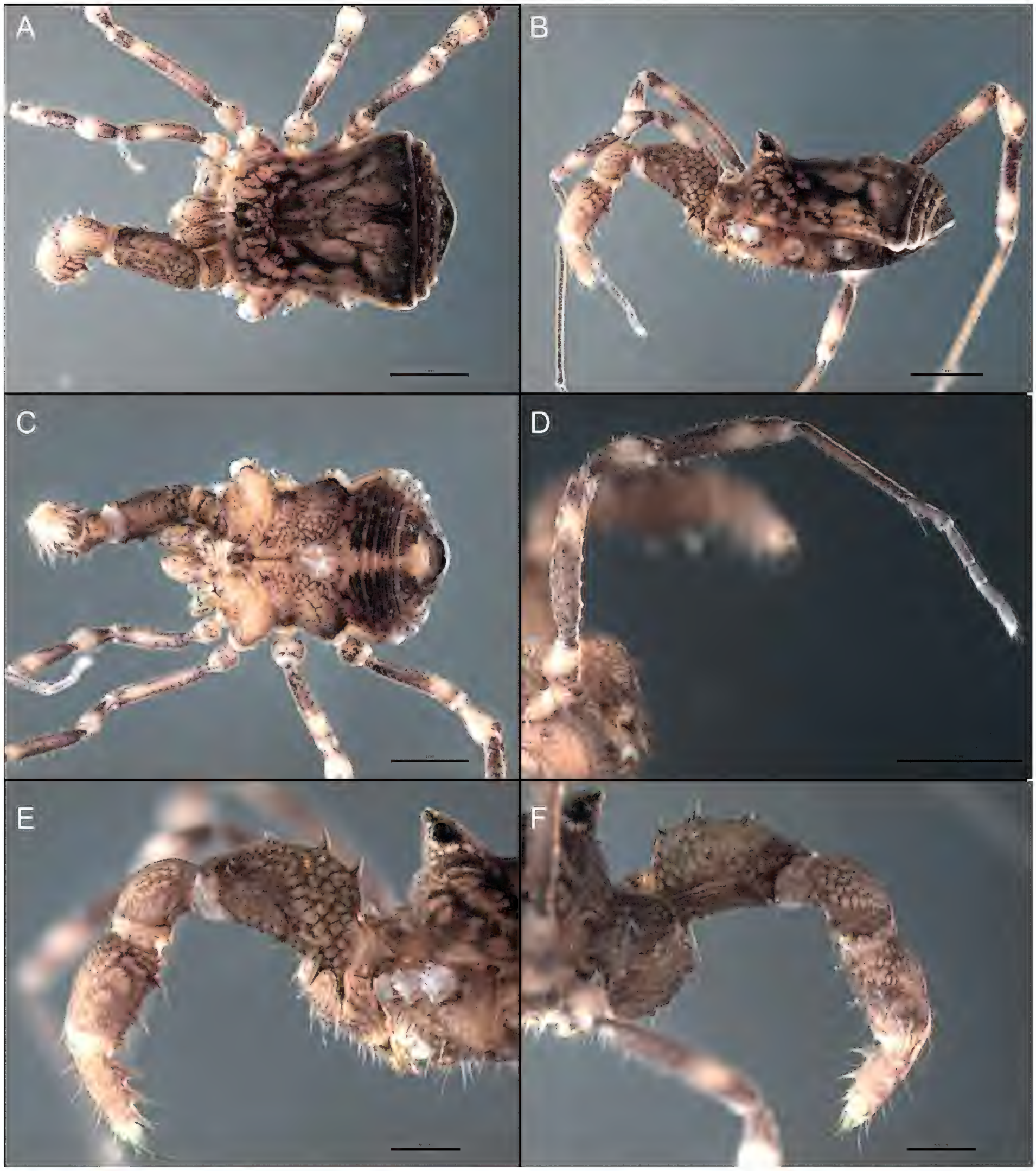

Figure 35. *Mistralia ramirezi*. sp. nov. habitus, male **A** dorsal view **B** lateral view **C** ventral view **D** leg I **E** pedipalp ectal **F** pedipalp mesal. Scale bars: 1 mm (**A–D**); 500 µm (**E, F**).

***Mistralia ramirezi* sp. nov.**

https://zoobank.org/28A61E8F-6EC9-4908-A88C-791AB46769B5

Figs 35–37

Material examined. *Holotype*. ♂ **Chile.** Malleco: Monumento Natural Contulmo, 38.01314°S, 73.18648°W, M. Ramírez, F. Labarque coll. 10.II.2005 (MNHNCL).

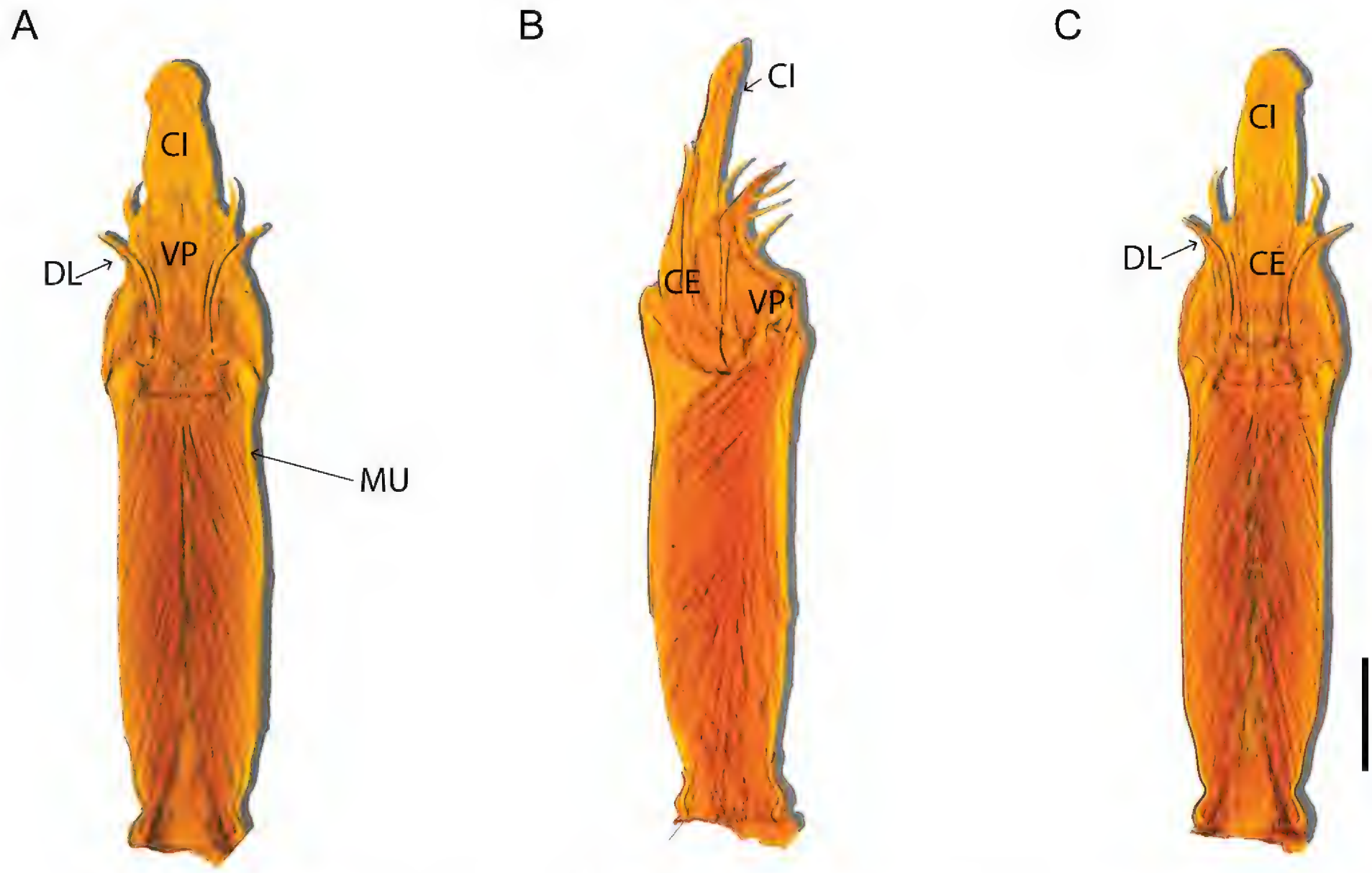

Figure 36. *Mistralia ramirezi* sp. nov. Penis ventral **A** lateral **B** dorsal **C**. Capsula interna (CI), Capsula externa (CE), dorsolateral plate (DL), ventral plate (VP), muscle (MU). Scale bar: 100 µm.

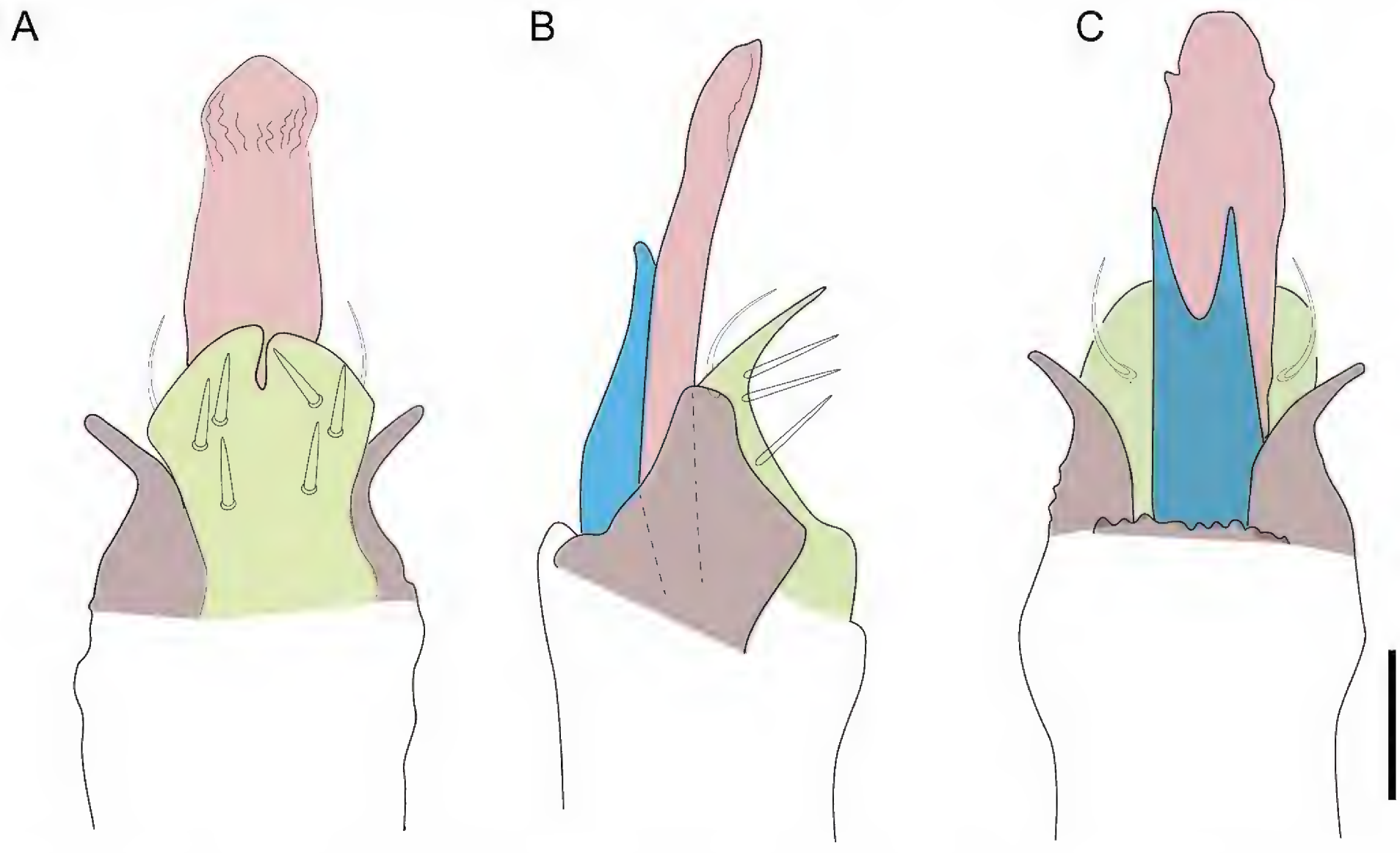

Figure 37. *Mistralia ramirezi* sp. nov. Penis ventral **A** lateral **B** dorsal **C** capsula interna (red), Capsula externa (blue), dorsolateral plate (brown), ventral plate (green). Scale bar: 100 µm.

Etymology. Patronym in honor to Argentine arachnologist, Martín Ramírez, esteemed colleague and friend, for his contributions to the field of spider taxonomy and systematics.

Diagnosis. This species can be easily distinguished from the other species in the genus by having sharp tubercles on the surface of the dorsal scute and by its unique genitalia, with a U-shaped capsula externa in dorsal view.

Distribution. Chile: Bío-Bío Region (Fig. 4B).

Description of male. Measurements: Total length 3.29, carapace length 0.77, dorsal scutum length 2.22, carapace max. width 1.72. Appendage measurements: Pedipalps. Trochanter length 0.28, femora length 1.27, patella length 0.64, tibia length 1.05, tarsus length 0.95. Leg I: trochanter (tr) 0.37, femora (fe) 0.30, patella (pa) 1.13, tibia (ti) 0.58, metatarsus (mt) 0.92, tarsus (ta) 1.03. II: tr 0.76, fe 0.34, pa 1.71, ti 0.63, mt 1.47, ta 1.75. III: tr 1.55, fe 0.36, pa 1.17, ti 0.51, mt 1.13, ta 1.44. IV: tr 0.97, fe 0.41, pa 1.56, ti 0.71, mt 1.47, ta 1.98.

Dorsum (Fig. 35). Eta (η) hourglass-shaped dorsal scutum. Ocularium elevated, with apophysis between eyes. Carapace smooth; mesotergum with areas delimited by tubercles. Areas I–IV characterized by two setiferous tubercles: posterior margin with a row of ca. 10 setiferous tubercles. Free tergites bear a row of setiferous tubercles, similar to those found on the posterior margin of the dorsal scutum.

Chelicerae. Segment II with two prominent tubercles and few granules.

Pedipalps. Femora and tibia covered with granules when viewed from dorsal and ectal perspectives. Femora with a row of three distinct ventral and dorsal spines. Patella with two mesal tubercles and one ectal tubercle, each accompanied by subdistal setae. In ventral view, tibia with four ectal and mesal spines with subdistal setae, as well as with a row of setiferous granules. Tarsus characterized by three mesal and ectal spines covered with subdistal setae.

Legs (Fig. 35D). Ventral surface: I–IV with small setiferous tubercles. Sternum arrow-shaped.

Penis (Figs 36, 37). Pars distalis with a ventral plate divided into two lamellae by a small cleft. Each lamella on the ventral surface bears three tiny macrosetae, while the dorsal surface has one macroseta. Capsula externa with a U-shaped slit, shorter in length compared to the capsula interna, which is tubular in shape.

Female. Unknown.

Mistralia verrucosa (Maury, 1990), comb. nov.

Figs 38–43

Nuncia verrucosa Maury, 1990: 106, figs 1–12; Maury 1992: 5; Acosta and Maury 1998: 579; Kury 2003: 22; Pérez-Schultheiss et al. 2021: 413, fig. 3c, f.

Material examined. ***Holotype*****.** ♂ **Chile.** Termas del Río Amarillo, Palena Province, E. Maury coll., 04.XII.1986 (MACN 8685). ***Paratype*** **(allotype ♀). Chile.** Los Derrumbes, Puyehue, Osorno Province, E. Maury coll., 04–05.XII.1985 (MACN 8686).

Paratypes**. Chile.** Río Palena, Aysén Province, 1 ♂ and 1 ♀, E. Maury coll., 06–07.XII.1986 (MACN 8687).

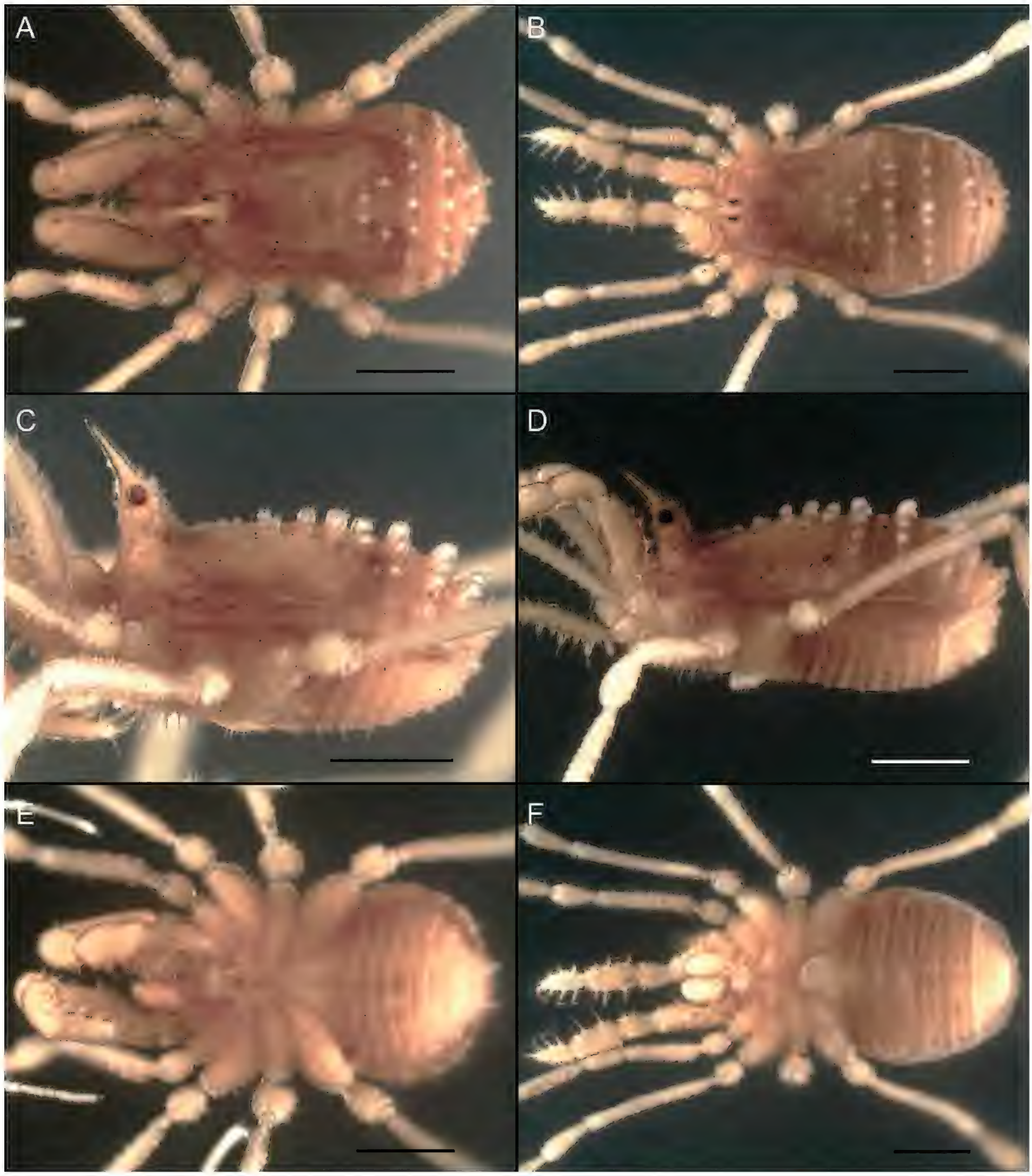

Figure 38. *Mistralia verrucosa* comb. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade B, see Fig. 3.

Additional material. ARGENTINA. Río Negro: Parque Nacional Nahuel Huapi, Río Frías Superior, D. Anghicante coll., 26.I.1990, 2 imm. Neuquén: Lago Ortiz Basualdo, M. Ramírez coll., I.1990, 1 ♂ (MACN), P.N. Nahuel Huapi, Puerto Blest, M. Ramírez coll., 10.I.1998, 1 ♂ 1 ♀ 1 imm. (MACN). Osorno: Los Derrumbes, 5 km al S de Termas Puyehue, A. Roig coll., I.1988, 1 ♂ (MACN). Same locality, E. Maury coll., 18.I.1989, 1 ♂ (MACN). Los Derrumbes, 5 km al S de Termas Puyehue, 40.73807°S, 72.31114°W, 536 m, E. Maury coll., 04.12.1985, 1 ♀ (MACN).

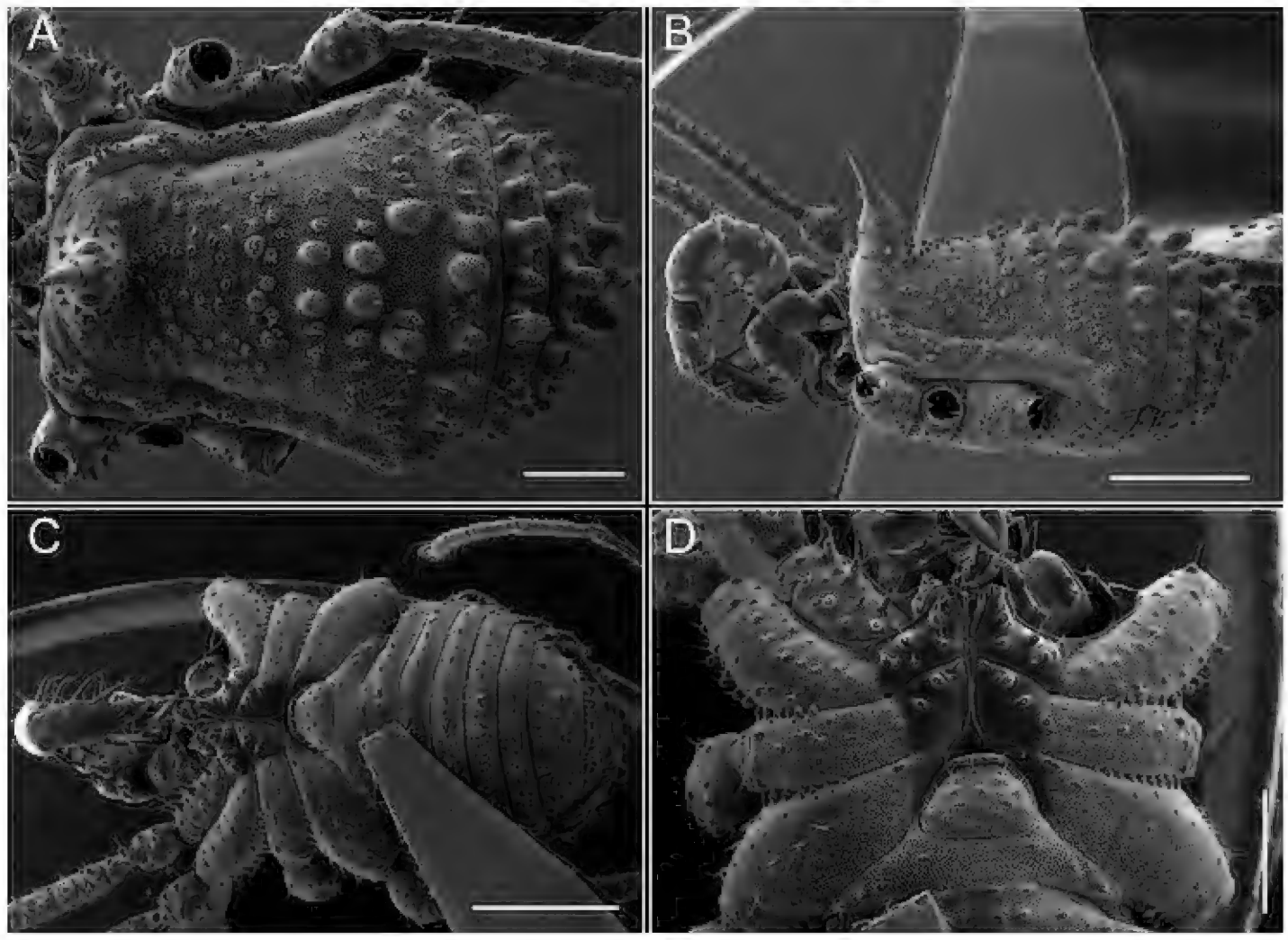

Figure 39. *Mistralia verrucosa* comb. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 μm (**D**).

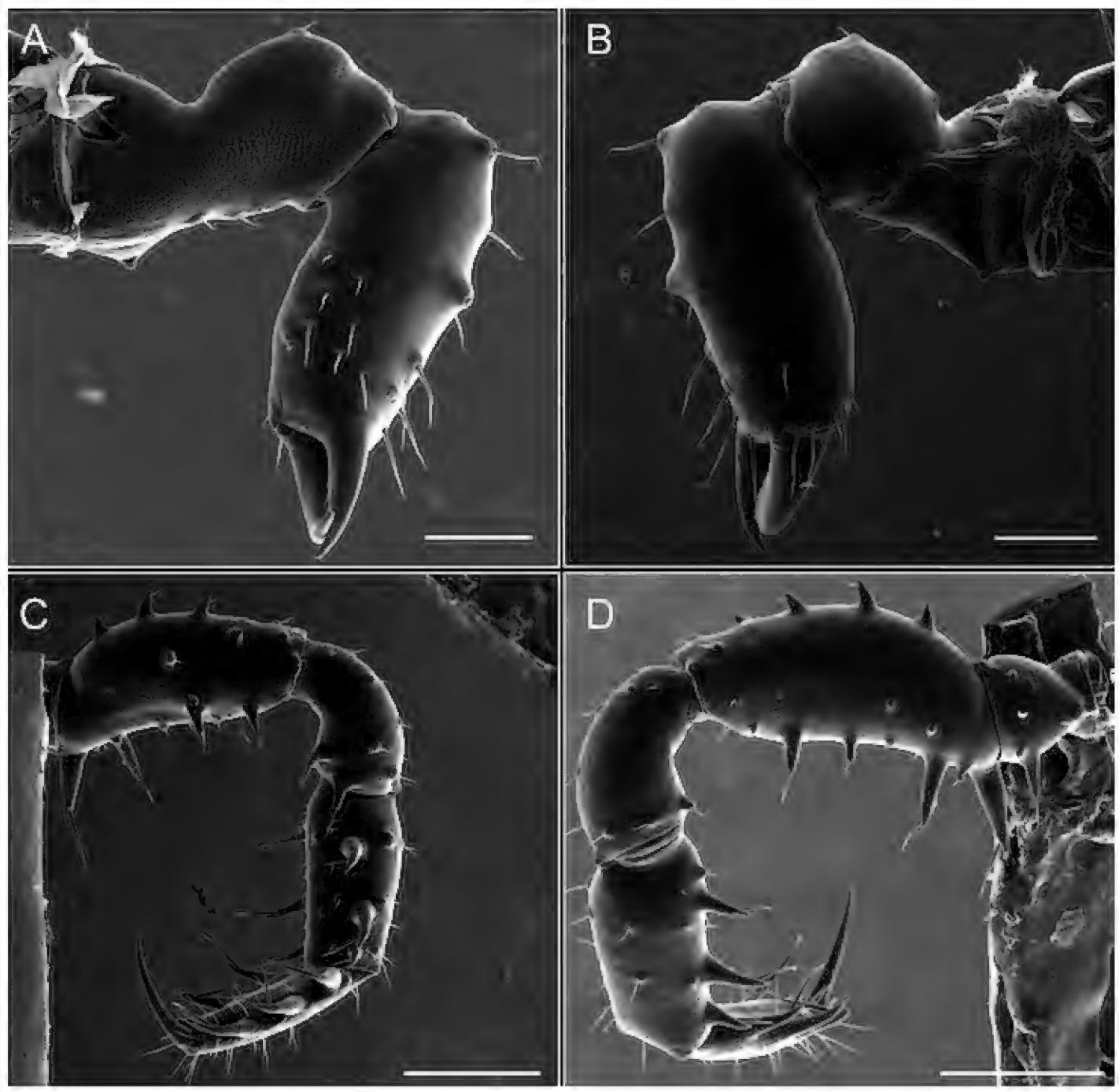

Figure 40. *Mistralia verrucosa* comb. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

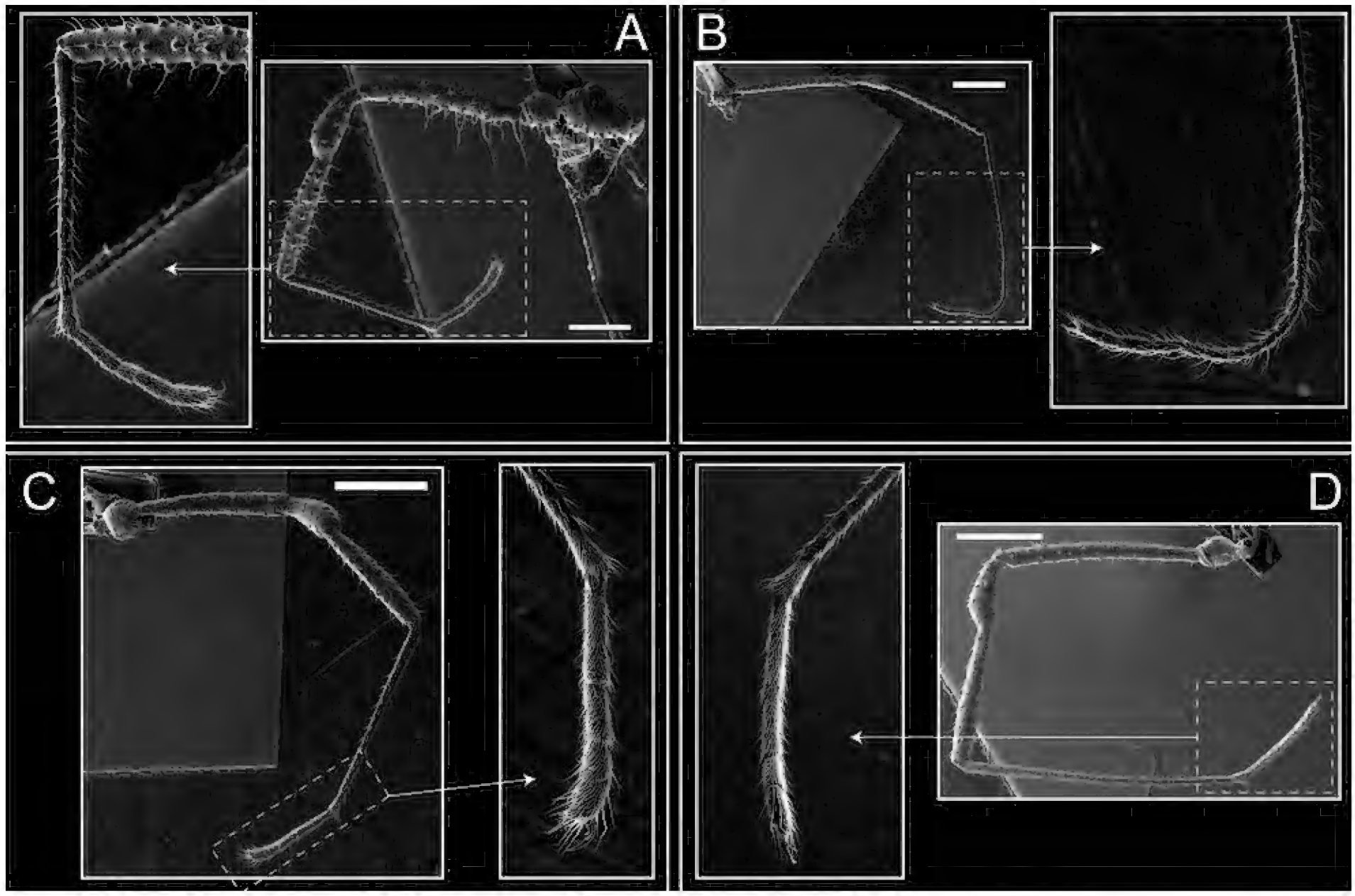

Figure 41. *Mistralia verrucosa* comb. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 1 mm.

Diagnosis. This species can be readily distinguished from other species within the genus by its distinctive ocularium with a prominent elongated process. The tubercles on the dorsal scutum are wart-like. The dorsal plate of the penis is divided into two elongated structures with small apical projections.

Distribution. Argentina: Provinces of Neuquén and Río Negro. Chile: Los Lagos Region (Fig. 4B).

Redescription of male. Measurements: Total length 3.60, length of carapace 1.16, length of dorsal scutum 2.70, max. width of carapace 1.74. max. width of mesotergum 2.00. Appendage measurements: Pedipalps. Length of trochanter 0.28, length of femora 1.15, length of patella 0.56, length of tibia 0.87, length of tarsus 0.91. Leg I: trochanter (tr) 0.36, femora (fe) 1.62, patella (pa) 0.66, tibia (ti) 1.27, metatarsus (mt) 1.44, tarsus (ta) 0.91. II: tr 0.39, fe 2.4, pa 0.73, ti 1.97, mt 2.57, ta 1.97. III: tr 0.37, fe 1.78, pa 0.63, ti 1.49, mt 2.17, ta 1.05. IV: tr 0.44, fe 2.52, pa 0.73, ti 1.77, mt 3.36, ta 1.12.

Dorsum (Fig. 38, 39). Eta (η) hourglass-shaped dorsal scutum. Anterior margin with 2–3 small setiferous tubercles on each side. Ocularium raised, with a long spine between eyes, covered in setiferous tubercles and with few setae on the spine. Carapace with fine microgranulation; adorned with warts-shaped tubercles, while the mesotergum microgranulate. Areas I–IV with setiferous tubercles, with area I having a pair of wart-shaped tubercles, and areas II–IV exhibiting 2–3 robust wart-shaped tubercles. Posterior margin adorned with a row of six wart-like tubercles. Free tergites also with a row of wart-shaped tubercles similar to those found on the posterior margin of the dorsal scutum.

Chelicerae (Fig. 40A, B). Segment I with few setae. Segment II with few granules.

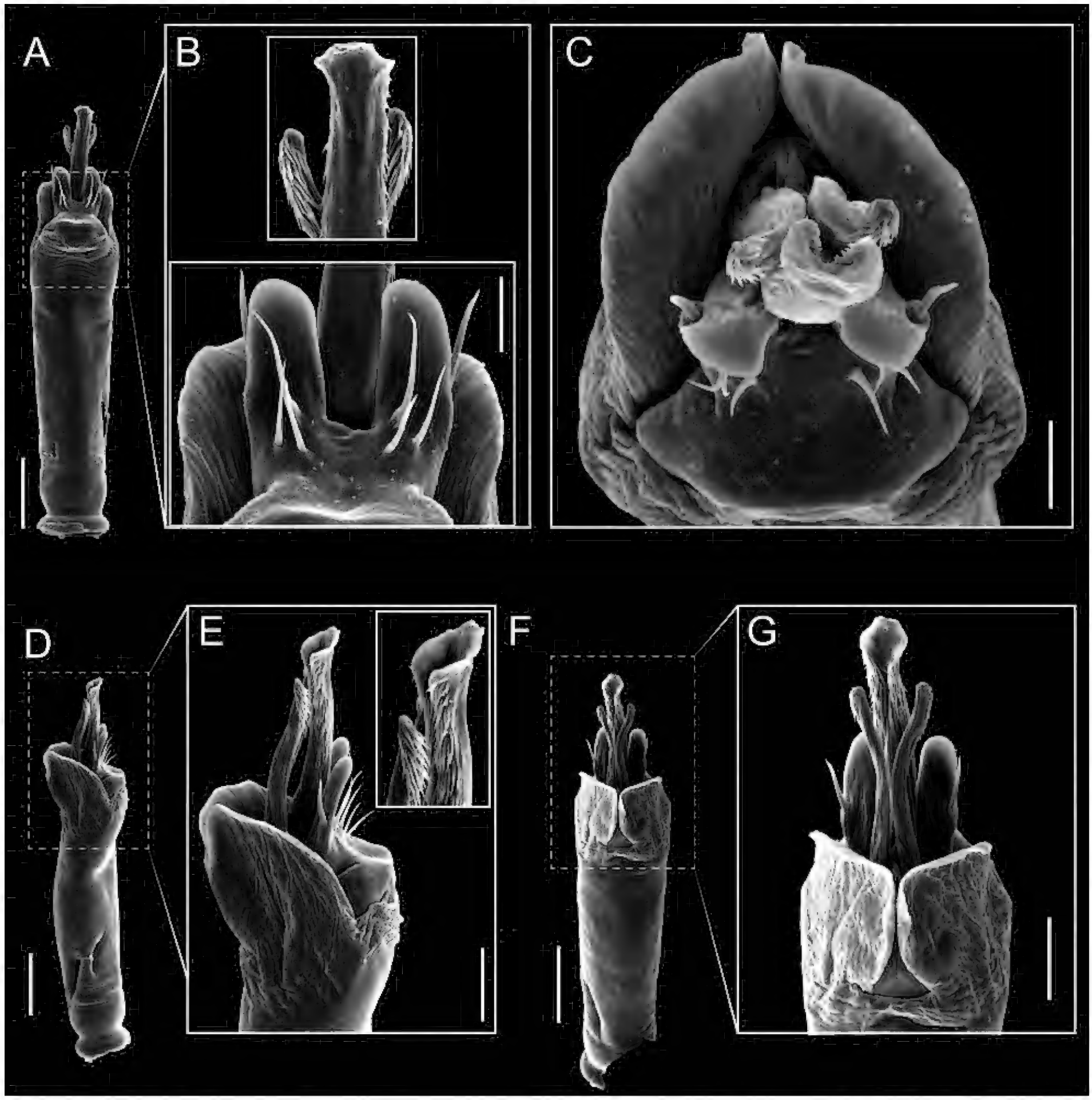

Figure 42. *Mistralia verrucosa* comb. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 100 μm (**B, E, G**); 50 μm (**C**).

Pedipalps (Fig. 40C, D). Trochanter with dorsal and ectal granules and a ventral spine with a seta. Ventral surface of femora with a row of four spines with subdistal setae and three small setiferous tubercles. In ectal view, there are 4–5 setiferous granules, while the dorsal surface features a row of three spines with subdistal setae. In mesal view, there are two distal tubercles with setae, with a row of setiferous granules on the top and bottom of the mesal surface. Dorsal surface of the patella with a few setiferous granules, while the mesal view exhibits two spines with setae, and the ectal view has setiferous granules. Tibia with setiferous granules on the dorsal and ventral surfaces, in addition to six ventral spines with subdistal setae. Tarsus with three mesal and ectal spines with subdistal setae.

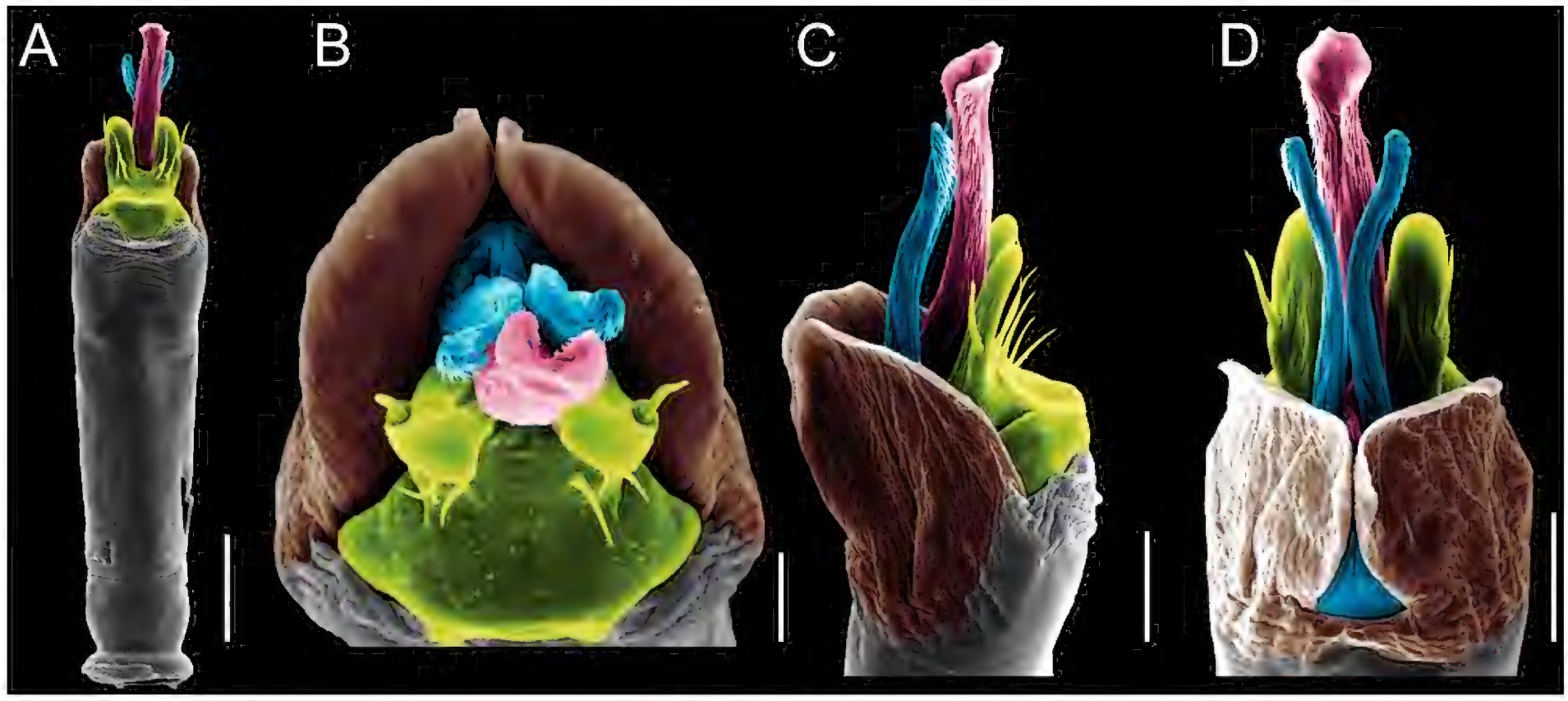

Figure 43. *Mistralia verrucosa* comb. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 200 μm (**A**); 50 μm (**B**); 100 μm (**C, D**).

Legs (Fig. 41). I with three rows of small tubercles and one row of long tubercles with subdistal setae, II and III with one row of small tubercles each, and IV exhibiting microgranulation, with six bridges between coxa II–III, 8–9 eight or nine bridges between coxa III and IV, and three or four between coxa IV and opisthosoma. Spiracles visible. The smooth surface covers ~ ¼ of leg II (which features three tubercles with setae) and III and occupies < ¼ of the IV coxa (with a row of 2–3 small tubercles and a process directed towards the sternum). The opisthosomal sternites possess a row of small setiferous tubercles. Sternum arrow-shaped.

Trochanters I–IV bearing small dorsal setiferous tubercles, trochanter I with a ventral tubercle with setae. Femora I–IV bearing small setiferous tubercles. Femora I with a ventral row of remarkable spines with setae. Tarsal count: 5–10/12–4–4.

Penis (Figs 42, 43). Pars distalis equipped with a ventral plate featuring a long cleft, dividing it into two lamellae. Each lamella with three small macrosetae on its ventral surface and one macroseta on the dorsal surface. Capsula externa shorter in length compared to the capsula interna, divided into two cylindrical structures adorned with numerous small apical denticles. Capsula interna tubular in shape, with dorsal-apical denticles.

Female. Similar to the male, with shorter pedipalpal femora and without interocular apophysis.

Female measurements. Total length 3.15, length of carapace 1.52, length of dorsal scutum 2.62, max. width of carapace 1.73, max. width of mesotergum 2.28. Appendage measurements: Pedipalps. Length of trochanter 0.27, length of femora 1.21, length of patella 0.75, length of tibia 0.90, length of tarsus 1.26. Leg I: trochanter (tr) 0.34, femora (fe) 1.60, patella (pa) 0.73, tibia (ti), 1.24, metatarsus (mt) 1.51, tarsus (ta) 0.81. II: tr 0.45, fe 2.42, pa 0.83, ti 2.00, mt 2.65, ta 1.98. III: tr 0.45, fe 1.77, pa 0.75, ti 1.37, mt 2.12, ta 1.07. IV: tr 0.39, fe 2.59, pa 0.89, ti 1.88, mt 3.48, ta 1.36. Tarsal count: 4–9(10)–4–4.

Clade C

Genus *Chilenuncia* Muñoz-Cuevas, 1971, nom. rest.

Figs 44–55

Chilenuncia Muñoz-Cuevas, 1971: 873; Cekalovic 1985: 11 [considered syn. jr. of *Nuncia* Loman, 1902, by Maury 1990].
Parattahia [part]: Soares 1968: 266; Cekalovic 1985: 11; Maury and Roig Alsina 1985: 78.
Nuncia [part]: Maury 1990: 103, 105; Kury 2003: 21.

Diagnosis. It is distinguished from all other South American Triaenonychidae by the unique morphology of the male genitalia, characterized by a capsula externa that covers nearly the entire capsula interna, with a small apical cleft. The external morphology, particularly the presence of a small curved apophysis in the ocularium, allows for differentiation from other South American triaenonychid genera, although it bears resemblance to the Australian genus *Calliuncus*, which forms part of Clade C.

Type species. *Chilenuncia donosoi* Muñoz-Cuevas, 1971 (syn. jr. of *Parattahia chilensis* Soares, 1968)

Included species. *Chilenuncia chilensis* comb. nov., *Chilenuncia rostrata* comb. nov.

Distribution. Argentina: Neuquén, Río Negro. Chile, Metropolitan Region of Santiago, O'Higgins, Maule, Ñuble, Bío-Bío, Araucanía, Los Ríos, Los Lagos, and Aysén Regions (Fig. 4C).

Chilenuncia chilensis (Soares, 1968), comb. nov.

Figs 44–49

Parattahia chilensis Soares, 1968: 266, figs 13, 14; Muñoz-Cuevas 1971: 873, fig. 28; Cekalovic 1985: 11.
Nuncia chilensis: Maury 1990: 105; Acosta and Maury 1998: 579; Kury 2003: 21.
Chilenuncia donosoi Muñoz-Cuevas, 1971: 874, figs 1–28; Cekalovic 1985: 11. [Synonymy established by Maury, 1990].

Material examined. Chile. Osorno: Puyehue, Anticura Sector, Parque Nacional Puyehue, Sendero Pionero, M. Ramírez, F. Labarque coll., 06.II.2005, 1 imm. (MACN). Llanquihue: Alerce Andino, Correntoso, M. Ramírez, F. Labarque coll., 03.II.2005, 1 imm. (MACN). Talca: RN Altos del Lircay, E Vilches Alto, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 11.I.2018, 6 ♂ 9 ♀ 2 imm. (MACN). Cachapoal: Reserva Nacional Río de los Cipreses, near the El potrero, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 09.I.2018, 1 ♀ 2 imm. (MACN). Curicó: El Potrero Grande, El Relvo, J. Barriga coll., 08.V.2004, 1 ♀ (MACN). Arauco: P.N. Nahuelbuta, Pichinahuel, J. Barriga coll., 22.XI.2004, 1 ♂ (MACN). Osorno: Camping "No me olvides", 7 km E de Entrelagos, E. Maury coll., 30.I.1991, 9 ♂ 7 ♀ 16 imm. (MACN). Puerto Cárdenas, T. Cekalovic coll., 31.I.1982, 1 imm. (MACN). Curicó: Los Queñes, E. Maury coll., 15.I.1984, 1 ♀ 1 imm. (MACN). Coyhaique: 10 km N de

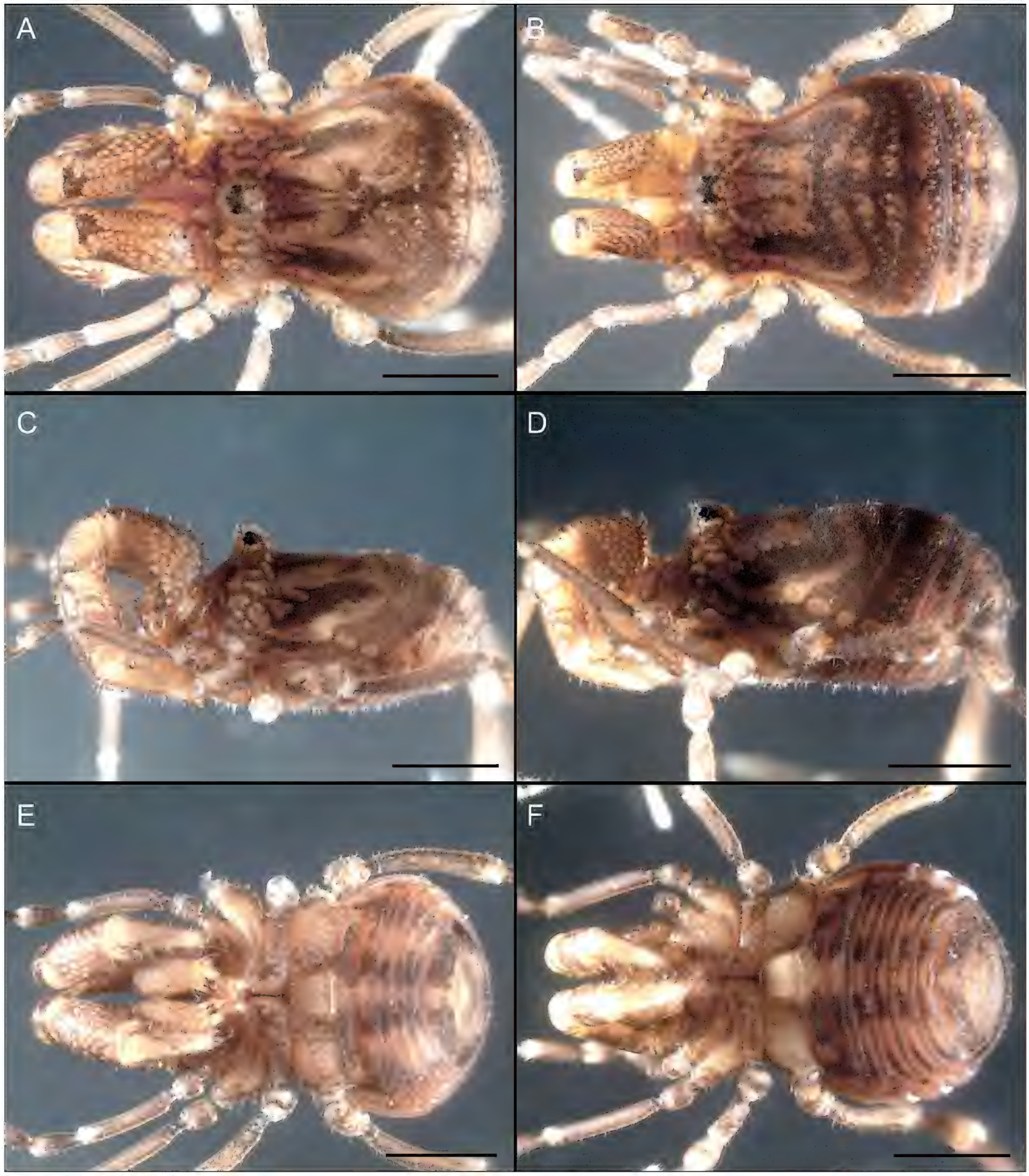

Figure 44. *Chilenuncia chilensis* comb. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

Coyhaique, Reserva Nacional, S. Peck, J. Peck coll., 22.I.1985, 1 ♀ (AMNH). Frutillar Bajo, Univ. Chile Forest Res., S. Peck J. Peck coll., 22.XII.1984, 1 ♀ (AMNH). Palena: Near Chaitén, R.Schuh, N. Platnick coll., 05.XII.1981, 1 ♀ 3 imm. (AMNH); Chaitén, N. Platnick, R.Schuh coll., 07.XII.1981, 2 ♀ 1 imm. (AMNH); 25–27 km N Chaitén, N. Platnick, P. Goloboff, R.Schuh coll., 17.I.1986, 1 imm. (AMNH), Termas Río Amarillo, E. Maury coll., 04.XI.1986, 2 ♂ 1 ♀ (MACN), 11 km O de Río Negro, E. Maury coll., 08.XII.1985, 9 ♂ 1 ♀ (MACN).

La Cabaña, A. Hidalgo coll., 01.II.1982, 1 imm. Cautín: Bellavista, Fundo Flor del Lago, M. Ramírez, F. Labarque coll., 09.II.2005, 4 ♂ 1 ♀ 1 imm. (MACN), 3 ♂ 2 imm. (MACN). Llanquihue: Los Muermos, E.Ross, A.Michelbacher coll., 20. I.1951, 2 ♀; Frutillar, G. Kuschel coll., 29.IX.1954, 5 imm. Alerce Andino, Correntoso, M. Ramírez, F. Labarque coll., 03.II.2005, 6 imm. (MACN), 7 km N Enseada, N. Platnick, R.Schuh coll., 26.XI.1981, 1 imm. (AMNH), Lago Chapo, 11.7 km E Correntoso, A. Newton, M. Thayer coll., 16.XII.1982, 1 imm. (AMNH), 10–14 km E Correntoso, N. Platnick, O. Francke coll., 03.II.1985, 1 imm. (AMNH), Carretera Austral, Caleta La Arena, E. Maury coll., 07.XII.1985, 15 imm. (MACN); Playa Magui, 7 km NE Frutillar, E. Maury coll., 27.I.1991, 11 imm. (MACN); P.N. Alerce Andino, N. Platnick, K. Catley, M. Ramírez, T. Allen coll., 23.XI.1993, 1 imm. (AMNH). Argentina. Neuquén: 4 km W de Poracá, L. Herman coll., 21.I.1972, 2 imm., Road between Pucará y Laguna Venados, L. Herman coll., 25.I.1972, 4 imm., Hua Hum, E. Maury coll., 19.I.1983, 1 ♂ (MACN), Lago Huechulafquen, M. Ramírez coll., 07.I.1985, 1 imm. (MACN); Hua Hum, E. Maury coll., 17.I.1985, 2 imm. (MACN); Río Pucará S shore, Lago Lacar, 8 km E Hua Hum, N. Platnick, R.Schuh coll., 13.I.1986, 1 imm. (AMNH), Lago Tromen, E. Maury coll., 18.I.1987, 1 imm. (MACN), Nahuel Huapi, E. Maury coll., 23.XI.1987, 2 imm. (MACN). Chile. Chiloé: 5 km de Chepu, T.Cekalovic coll., 23.II.1968, 3 imm. (MACN), Cruce camino a San Pedro, T.Cekalovic coll., 26.II.1976, 8 imm. (MACN); Chepu, N. Platnick, R. Schuh coll., 29.XI.1981, 1 imm. (AMNH); 5 km N Quellón, N. Platnick, R.Schuh coll., 01.XII.1981, 2 imm. (AMNH), Piruquina, T. Cekalovic coll., 09.II.1983, 1 imm. (MACN), Isla Chiloé, 8 km S Ancud, S.Peck, J.Peck coll., 01.II.1985, 2 imm. (AMNH); Chepu, E. Maury coll., 11.XII.1985, 1 imm. (MACN); Cucas, E. Maury coll., 12.XII.1985, 5 imm. (MACN). Cautín: Parque Nacional Villarrica, M. Ramírez, F. Labarque coll., 08.II.2005, 6 imm. (MACN); Bellavista, Lago Villarrica, N. Platnick, K. Catley, M. Ramírez, T. Allen coll., 20.XI.1993, 1 imm. (AMNH); Huerquehue, Laguna Toro, M. Ramírez, F. Labarque coll., 02.VII.2005, 1 imm. (MACN), Volcán Villarrica, site 654, A. Newton, M. Thayer coll., 15.XII.1982, 7 imm. (AMNH), site 653, A. Newton, M. Thayer coll., 15.XII.1982, 1 imm. (AMNH), Molco, T. Cekalovic coll., 22.II.1983, 1 imm. (MACN), 15 km NE Villarrica, Flor del Lago, S. Peck, J. Peck coll., 01.XI.1985, 7 imm. (AMNH); Bellavista, Lago Villarrica, N. Platnick, O. Francke coll., 28.I.1985, 15 imm. (AMNH), R. Schuh, N. Platnick coll., 30.X.1986, 13 imm. (AMNH); Molco Alto, T.Cekalovic coll., 18.II.1986, 3 imm. (MACN); Ojos del Caburgua, 15 km NE de Pucón, E. Maury coll., 16.I.1987, 3 imm. (MACN), Termas de Palguin, SE de Pucón, E. Maury coll., 17.I.1987, 11 imm. (MACN). Maule: Talca, Parque Nacional Gil de Vilches, N. Platnick, P. Goloboff, M. Ramírez coll., 08.II.1992, 1 imm. (AMNH). Talca: Vilches, E. Maury coll., 16.1.1984, 3 imm. (MACN). Same collector, 07.I.1989, 10 imm. (MACN). Las Tacitas, Bordon coll., II.1972, 1 imm. Talca: A. Roig coll., 17.I.1984, 3 imm. (MACN). Maule: Curicó, Los Queñes, P. Goloboff, K. Catley coll., 17.X.1992, 2 imm. (AMNH). Malleco: Parque Nacional Nahuelbuta, M. Ramírez, F. Labarque coll., 12.II.2005, 2 ♂ 3 ♀ 4 imm. (MACN), E. Schlinger, E. Irwin coll., 09.IX.1966, 1 ♀ 1 imm., Monumento Nacional Contulmo, M. Ramírez, F. Labarque coll., 10.II.2005, 1 ♂ 1 ♀ (MACN), Puren Contulmo Nat. Mon, S.Peck, J.Peck coll., 13.II.1985, 1 ♂ (AMNH); Malalcahuello, E. Maury coll., 08.I.1987, 2 ♂ 1 ♀ (MACN); Parque Nacional Nahuelbuta, E. Maury coll., 23.XII.1985, 2 ♂ 1 ♀ (MACN). Arauco: Caramávida, E. Maury coll., 16.XII.1985, 2 ♂ 5 ♀ 7

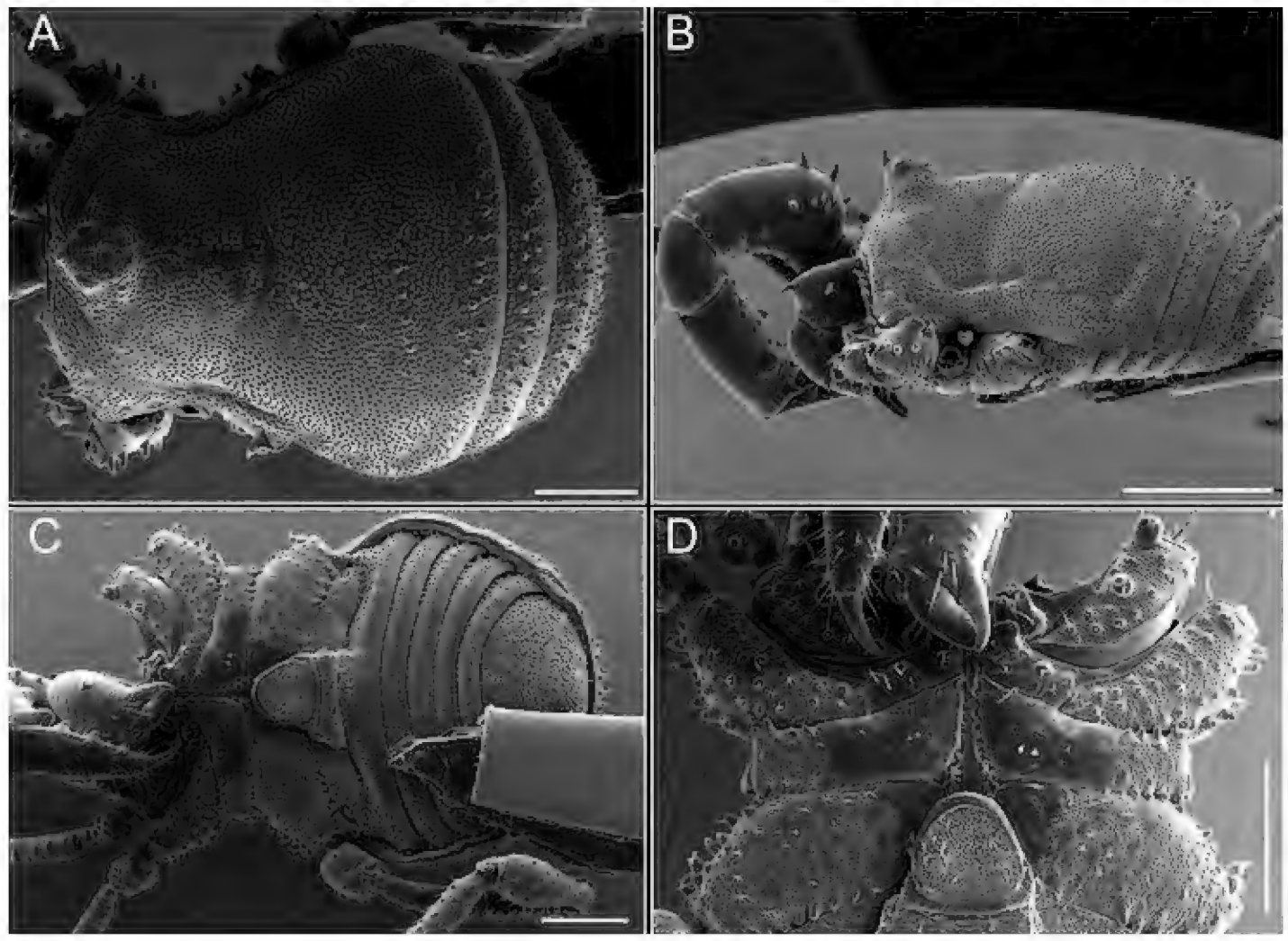

Figure 45. *Chilenuncia chilensis* comb. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

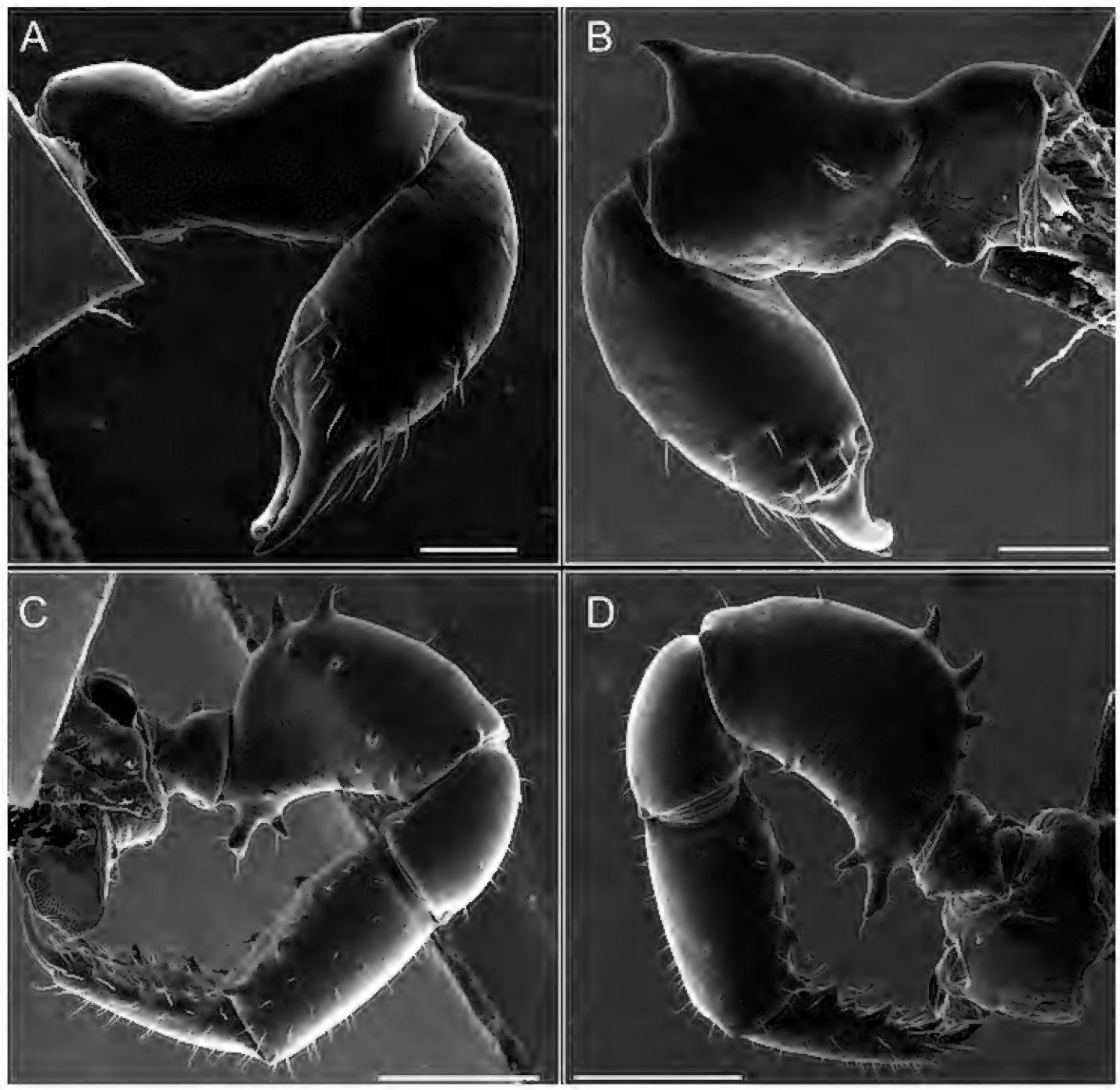

Figure 46. *Chilenuncia chilensis* comb. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

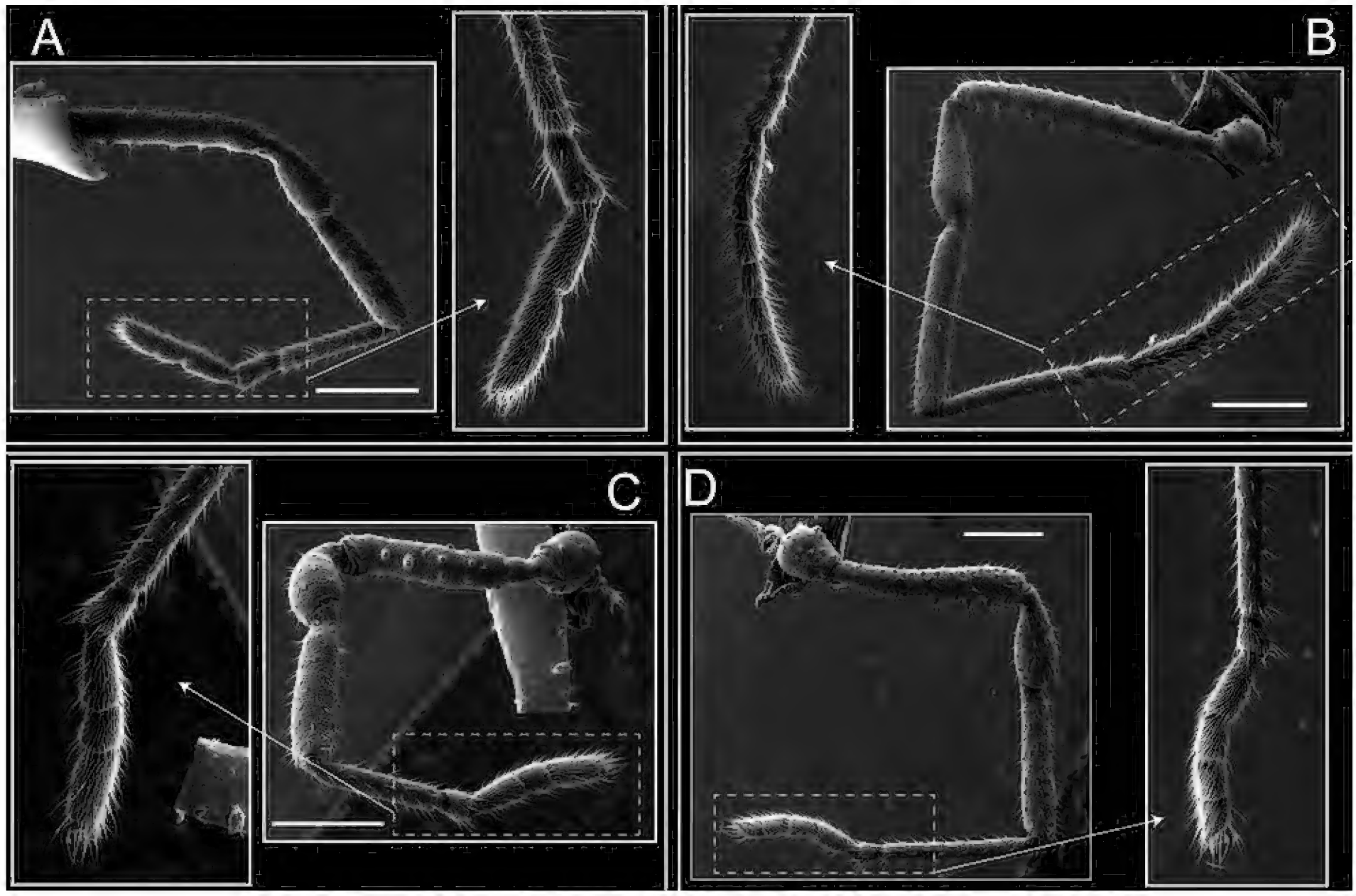

Figure 47. *Chilenuncia chilensis* comb. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 µm.

imm. (MACN). Ñuble: 2 km E de Las Trancas, E. Maury coll., 09.I.1989, 4 ♂ 1 ♀ (MACN). Malleco: Monumento Natural Contulmo, E. Maury coll., 10.I.1987, 3 ♀ (MACN), same collector, 13.I.1989, 2 ♂ 1 imm. (MACN), Parque Nacional Tolhuaca, 2 km E Lago Malleco, A. Newton, M. Thayer coll., 01.I.1983, 1 ♀ (AMNH). Osorno: 36 km W. La Union, L. Peña coll., 25.III.1987, 2 imm. (AMNH). Ñuble: 22.7 km ESE Recinto, site 646, A. Newton, M. Thayer coll., 10.XII.1982, 1 imm. (AMNH). Valdivia: 26 km SE Panguipulli, S. Peck, J. Peck coll., 16.XII.1984, 1 imm. (AMNH). Osorno: Águas Calientes, P. N. Puyehue, N. Platnick, R.Schuh coll., 28.I.1986, 1 imm. (AMNH), Hills of Maicolpue, N. Platnick, P. Goloboff, M. Ramírez coll., 19.II.1992, 1 imm. (AMNH), 10 km E of Bahia Mansa, N. Platnick, O. Francke coll., 30.I.1985, 4 imm. (AMNH); Puyehue, Anticura Sector, Parque Nacional Puyehue, Sendero Pionero, M. Ramírez, F. Labarque coll., 05.II.2005, 10 imm. (MACN); Antillanca road, 6–8 km SE Aguas Calientes, P. N. Puyehue, N. Platnick, R.Schuh coll., 28.I.1986, 3 imm. (AMNH), Termas de Puyehue, N. Platnick, R.Schuh coll., 24.XI.1981, 2 imm. (AMNH). Valdivia: Lago Calafquen, T.Cekalovic coll., 18.II.1977, 2 imm. (MACN). Osorno: Los Derrumbes, 5 km S de Termas de Puyehue, E. Maury coll., 09.I.1988, 5 imm. (MACN). Valdivia: Río Nahuicán, 24 km SE Corral, E. Maury coll., 16.I.1989, 5 imm. (MACN). Osorno: Anticura, E. Maury coll., 09.I.1988, 3 imm. (MACN). Valdivia: Pirehucico, E. Maury coll., 01.XII.1985, 10 imm. (MACN). Osorno: Los Derrumbes, E. Maury coll., 04.XII.1985, 9 imm. (MACN). Valdivia: Niebla, Camping “La Herradura”, 8 km East of Niebla, E. Maury coll., 23.I.1991, 10 imm. (MACN); Pirehucico, E. Maury coll., 18.I.1985, 5 imm. (MACN). Osorno: Los Derrumbes, E. Maury coll., 09.I.1988, 1 imm. (MACN). Termas Puyehue, S. Roig coll., I.1988, 1

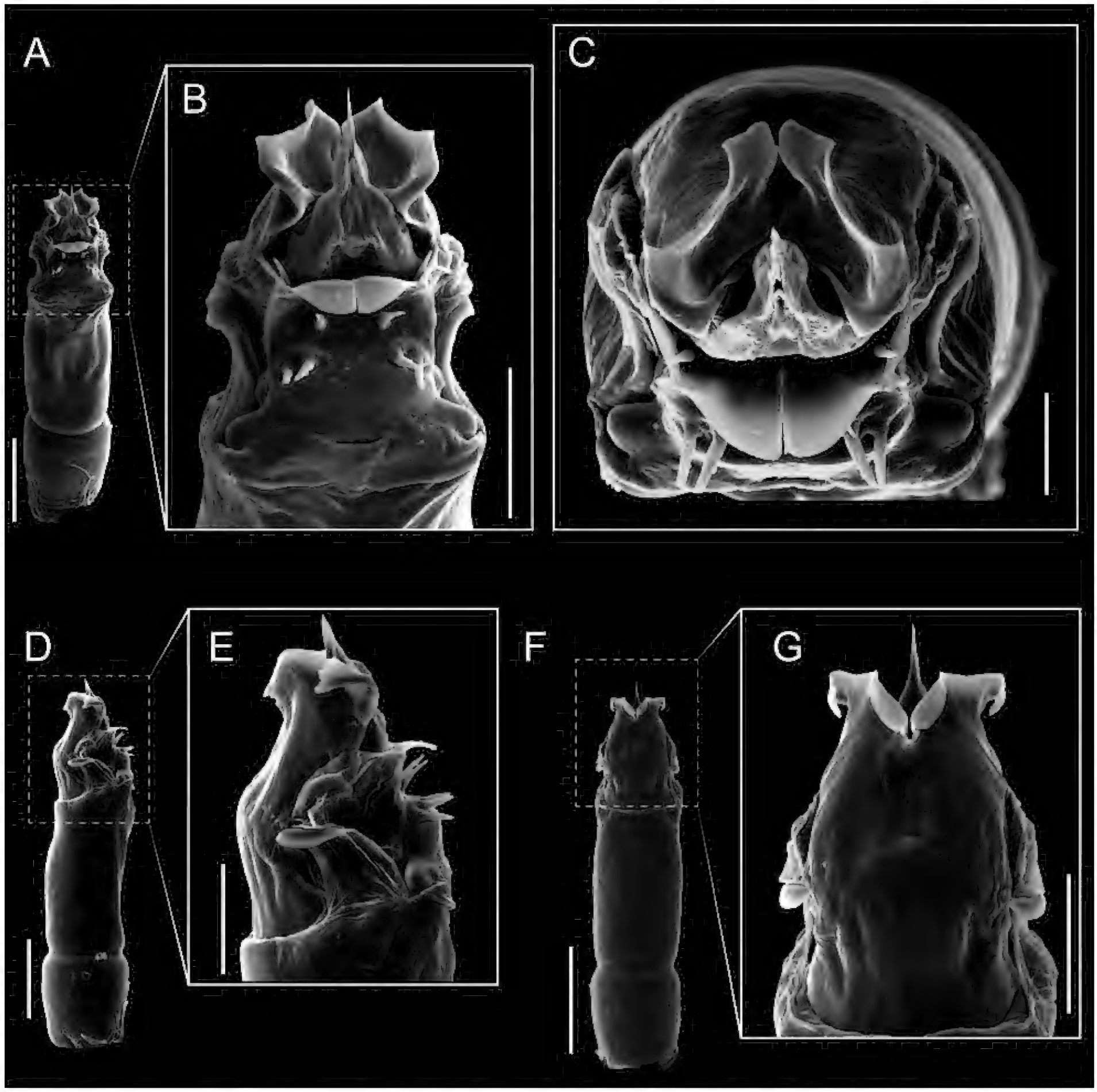

Figure 48. *Chilenuncia chilensis* comb. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 100 µm (**B, E, G**); 50 µm (**C**).

imm. (MACN), Arrededores de Puerto Montt, L. Pereira coll., 28.XI.1992, 1 ♀ (MACN). Osorno: Camping "No me olvides", 7 km E de Entrelagos, E. Maury coll., 30.I.1991, 7 imm. (MACN). 3 imm. (MACN), Termas de Río Amarillo, SE de Chaitén, E. Maury coll., 01.XII.1986, 3 imm. (MACN). Los Lagos: Sector Anticura, Parque Nacional Puyehue, Sendero Pionero, G. Giribet, G. Hormiga, A. Pérez-González coll., 17.XI.2014, 1 ♂ (MACN). Cautín: Parque Nacional Villarrica, M. Ramírez, F. Labarque coll., 08.II.2005, 1 imm. (MACN). Malleco: Parque Nacional Nahuelbuta, 2 imm. (MACN). Vilches: Las Tacitas, Bordon coll., II.1972, 1 imm. La Cabaña, T. Cekalovic coll., 01.II.1987, 1 imm. (MACN).

Diagnosis. This species, *C. chilensis*, can be readily distinguished from *C. rostrata* by its much shorter ocular process. Furthermore, it possesses a notch on

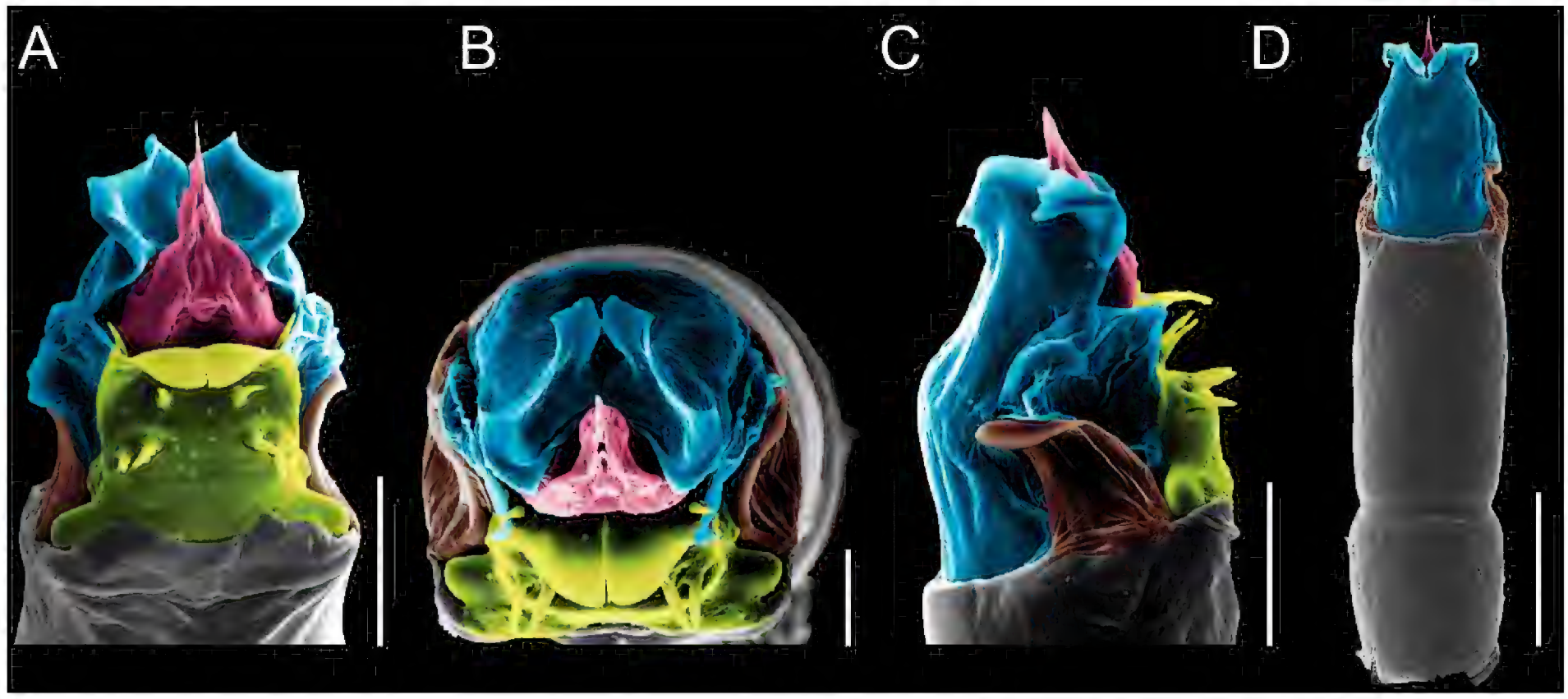

Figure 49. *Chilenuncia chilensis* comb. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 µm (**A, C, D**); 50 µm (**B**).

tarsus I and six tarsomeres on leg II (males), whereas *C. rostrata* exhibits seven tarsomeres on the same leg.

Distribution. Argentina: Provinces of Neuquén and Río Negro. Chile, Metropolitan Region of Santiago, O'Higgins, Maule, Ñuble, Bío-Bío, Araucanía, Los Ríos, and Los Lagos (Fig. 4C).

Redescription male. Measurements: Total length 3.40, carapace length 1.44, dorsal scutum length 2.66, carapace max. width 1.63, mesotergum max. width 2.31. Appendage measurements: Pedipalps. Trochanter length 0.25, femora length 1.32, patella length 0.79, tibia length 1.16, tarsus length 0.91. Leg I: trochanter (tr) 0.25, femora (fe) 1.22, patella (pa) 0.61, tibia (ti) 0.80, metatarsus (mt) 1.08, tarsus (ta) 0.82. II: tr 0.30, fe 1.71, pa 0.69, ti 1.23, mt 1.25, ta 1.37. III: tr 0.36, fe 1.05, pa 0.53, ti 0.83, mt 0.86, ta 0.97. IV: tr 0.41, fe 1.55, pa 0.81, ti 1.24, mt 1.44, ta 1.16.

Dorsum (Fig. 44, 45). Eta (η) hourglass-shaped dorsal scutum. Ocularium elevated and rounded, with a small frontal small apophysis perpendicular to the body. Dorsal scutum microgranulate, without distinct delimitation of areas. Areas I–IV with an arcuate row of small setiferous tubercles; posterior margin with two rows of small setiferous tubercles. All free tergites ornamented with small setae and with two rows of small setiferous tubercles.

Chelicerae (Fig. 46A, B). Segment I with an acute tubercle in the dorso-distal portion, providing a distinctive feature. Segment II with a small frontal tubercle and adorned with only a few setae.

Pedipalps (Fig. 46C, D). Trochanter with a dorsal tubercle adorned with setae and a small ventral spine. Femora with dorsal row of four small spines with subdistal setae, in ventral view with two long proximal spines with subdistal setae and a row of small tubercles. In mesal view, with six low setiferous tubercles. Patella with a smooth surface; tibia with two ectal and mesal tubercles with subdistal setae, a row of four small ventroproximal setiferous tubercles, and a row of three small ectal setiferous tubercles. Tarsus with three mesal and ectal tubercles with subdistal setae, with a few setae.

Legs (Fig. 47). Coxa I with two rows of setiferous tubercles, along two distal setiferous tubercles with subdistal setae. Coxa II with two rows of setiferous tubercles, while coxae III and IV feature only microgranulation. Three bridges between legs II and III, six between III and IV, and 4–8 between leg IV and the opisthosoma, with the distal bridge longer than the others. Spiracles unobstructed by bridges. A smooth surface covers ~ 1/3 of leg II, 3/4 of leg III, and < 1/3 of leg IV. Within the smooth area of leg II, there is a small tubercle on each side, accompanied by subdistal setae. Sternum arrow-shaped, with serrated margins, and the posterior area forms a triangle. Segments I–IV covered in setae, tarsal area, and calcaneus densely setose. Tibiae I–III with a ventral and dorsal row of small setiferous tubercles, whereas tibia IV has a row of four distal-ventral tubercles with setae. Calcaneus smaller than astragalus, ≥ 3× smaller in leg I, 4× smaller in legs II–III, and 5× smaller in leg IV. Tarsal count: 4–6–4–4.

Penis (Figs 48, 49). Pars distalis with a large ventral cleft that divides the plate into two lamellae. Each lamella is equipped with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa covers dorsal and lateral surfaces and exhibits a V-shaped medial notch, which divides the dorsal fold into two halves. A dorsolateral plate appears attached to the pars basalis. Capsula interna slightly longer than capsula externa and partially covers ventral plate. Capsula interna formed by two parts fused in the apical region and with a visible stylus in its medial portion.

Female. Similar to male, with shorter pedipalpal femora, presence of interocular process and a different tarsal count: 3–6–4–4.

Female measurements: Total length 2.87, carapace length 1.19, dorsal scutum length 2.38, carapace max. width 1.47, mesotergum max. width 2.14. Appendage measurements: Pedipalps. Trochanter length 0.28, femora length 0.96, patella length 0.55, tibia length 0.82, tarsus length 0.75. Leg I: trochanter (tr) 0.20, femora (fe) 1.08, patella (pa) 0.55, tibia (ti) 0.76, metatarsus (mt) 0.89, tarsus (ta) 0.74. II: tr 0.29, fe 1.32, pa 0.66, ti 1.08, mt 1.17, ta 1.30. III: tr 0.26, fe 1.01, pa 0.48, ti 0.69, mt 0.88, ta 0.78. IV: tr 0.32, fe 1.26, pa 0.71, ti 1.17, mt 1.28, ta 1.09.

Chilenuncia rostrata (Maury, 1990), comb. nov.

Figs 50–55

Nuncia rostrata Maury, 1990: 110, figs 25–35; Maury 1992: 4; Kury 2003: 22; Pérez-Schultheiss et al. 2019: 20; Pérez-Schultheiss et al. 2021: 412, fig. 3a, d.

Material examined. ***Holotype*****.** ♂ **Chile.** Llanquihue, Caleta La Arena, 50 km S de Puerto Montt, Carretera Austral, 07–08.XII.1985 (MACN 8703). ***Paratype*** **(allotype ♀).** **Chile.** Llanquihue, Caleta La Arena, 50 km S de Puerto Montt, Carretera Austral, 07–08.XII.1985 (MACN 8704). ***Paratypes*****.** Chile. Llanquihue, Caleta La Arena, 50 km S de Puerto Montt, Carretera Austral, 07–08.XII.1985 (MACN 8705).

Additional material. Chile. Llanquihue: 35 km W. Río Negro, R.Schuh, N. Platnick coll., 24.I.1986, 1 ♀ (AMNH). Chiloé: Chiloé Island, 5 km N of Quellón,

Figure 50. *Chilenuncia rostrata* comb. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

R.Schuh, N. Platnick coll., 01.XII.1981, 1 ♀ 1 imm. (AMNH), Isla Chiloé, R.Schuh, N. Platnick coll., 29.XI.1981, 1 ♂ 1 ♀ (AMNH). Llanquihue: P.N. Alerce Andino, N. Platnick, K.Catley, M. Ramírez, T.Allen coll., 23.XI.1993, 1 ♀ 2 imm. (AMNH). Palena: Termas de Pichicolo, 11 km west of Río Negro, Carretera Austral, E. Maury coll., 08.XII.1985, 1 ♀ (MACN 8706). Aysén: 30 km NE de Puerto Cisnes, E. Maury coll., 08.XII.1986, 2 ♀ 3 imm. (MACN 8707).

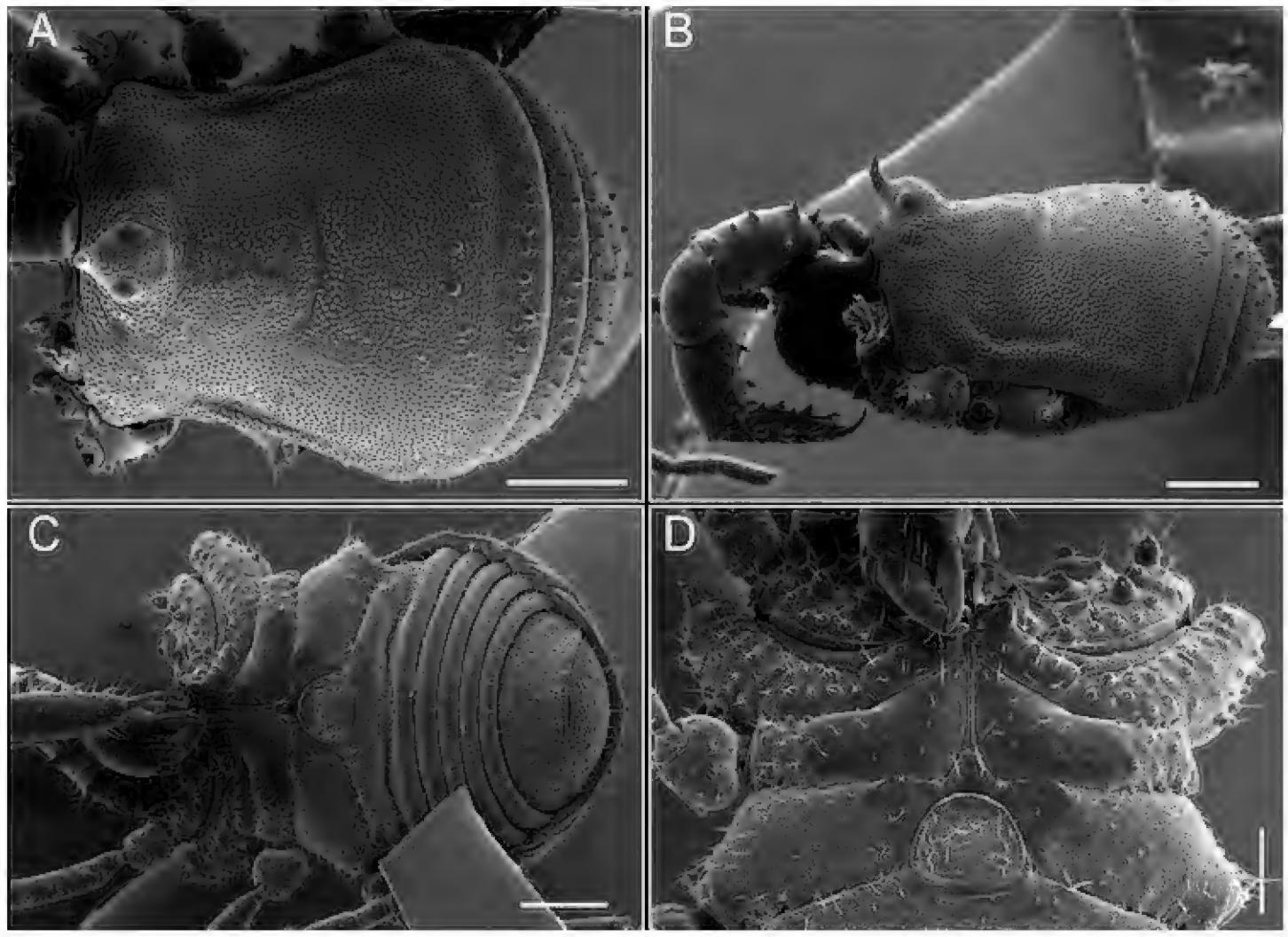

Figure 51. *Chilenuncia rostrata* comb. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

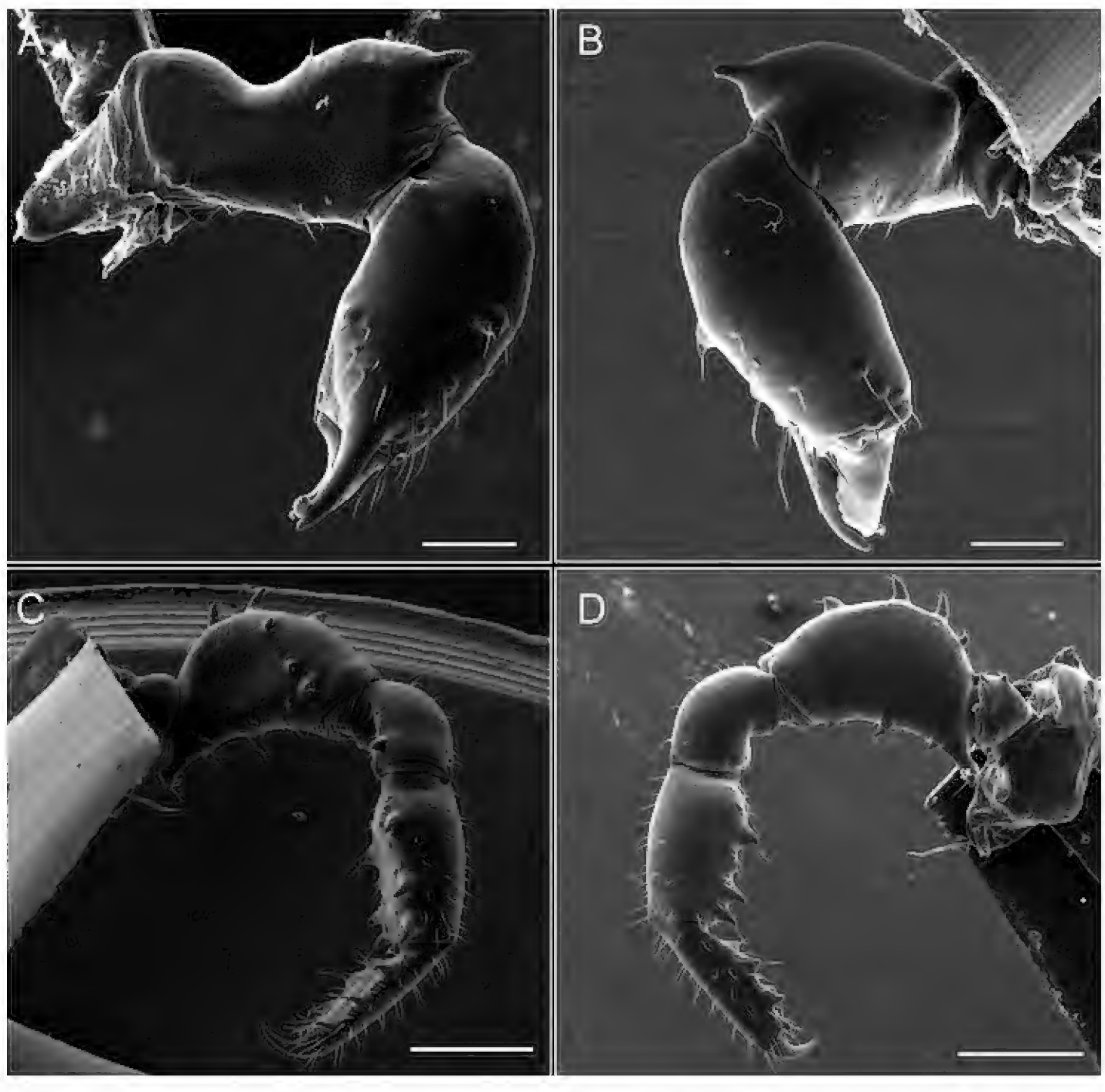

Figure 52. *Chilenuncia rostrata* comb. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

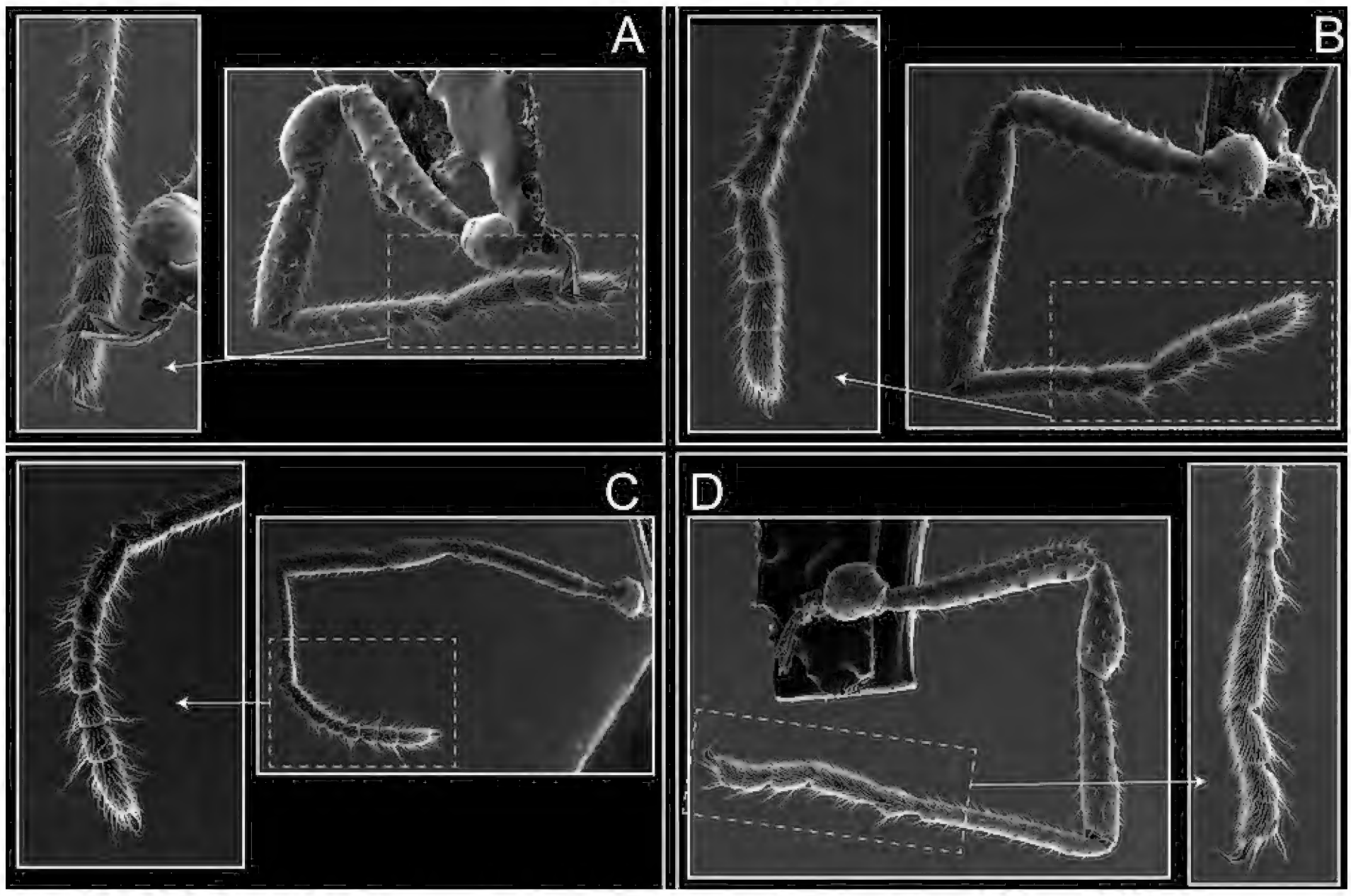

Figure 53. *Chilenuncia rostrata* comb. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 μm (**A, B, D**); 200 μm (**C**).

Diagnosis. This species can be readily distinguished from *C. chilensis* by the prominent interocular apophysis, which is notably longer in *C. rostrata*. Additionally, *C. rostrata* possesses seven tarsomeres on leg II (males), whereas *C. chilensis* has six. These characteristics serve as key distinguishing features between the two species.

Distribution. Chile: Los Lagos and Aysén Regions (Fig. 4C).

Redescription of male (MACN 8705). Measurements: Total length 2.97. Carapace length 1.07, dorsal scutum length 2.09, carapace max. width 1.49, mesotergum max. width 1.94. Appendage measurements: Pedipalps. Trochanter length 0.25, femora length 0.95, patella length 0.55, tibia length 0.68, tarsus length 0.66. Leg I: trochanter (tr) 0.25, femora (fe) 0.87, patella (pa) 0.50, tibia (ti) 0.70, metatarsus (mt) 0.89, tarsus (ta) 0.85. II: tr 0.33, fe 1.28, pa 0.54, ti 0.96, mt 1.08, ta 1.45. III: tr 0.32, fe 0.81, pa 0.43, ti 0.66, mt 0.77, ta 0.85. IV: tr 0.34, fe 1.15, pa 0.61, ti 0.95, mt 1.31, ta 1.03.

Dorsum (Fig. 50, 51). Eta (η) hourglass-shaped dorsal scutum. Ocularium elevated, with a long, backward-curving apophysis. Eyes located laterally in the middle of the ocular structure. Dorsal scutum microgranulate and without clear delimitation of areas. Area I with a pair of setae, while areas II–IV display an arcuate row of small setae tubercles. Posterior margin characterized by a row of small setiferous tubercles. All free tergites with a row of small setiferous tubercles.

Chelicerae (Fig. 52A, B). Segment I with a small tubercle on its dorso-distal surface; segment II with a mesal tubercle and bears a few setae.

Pedipalps (Fig. 52C, D). Trochanter with a small dorsal and ectal tubercle. Femora with two ventroproximal and one ventromedial spine with subdistal se-

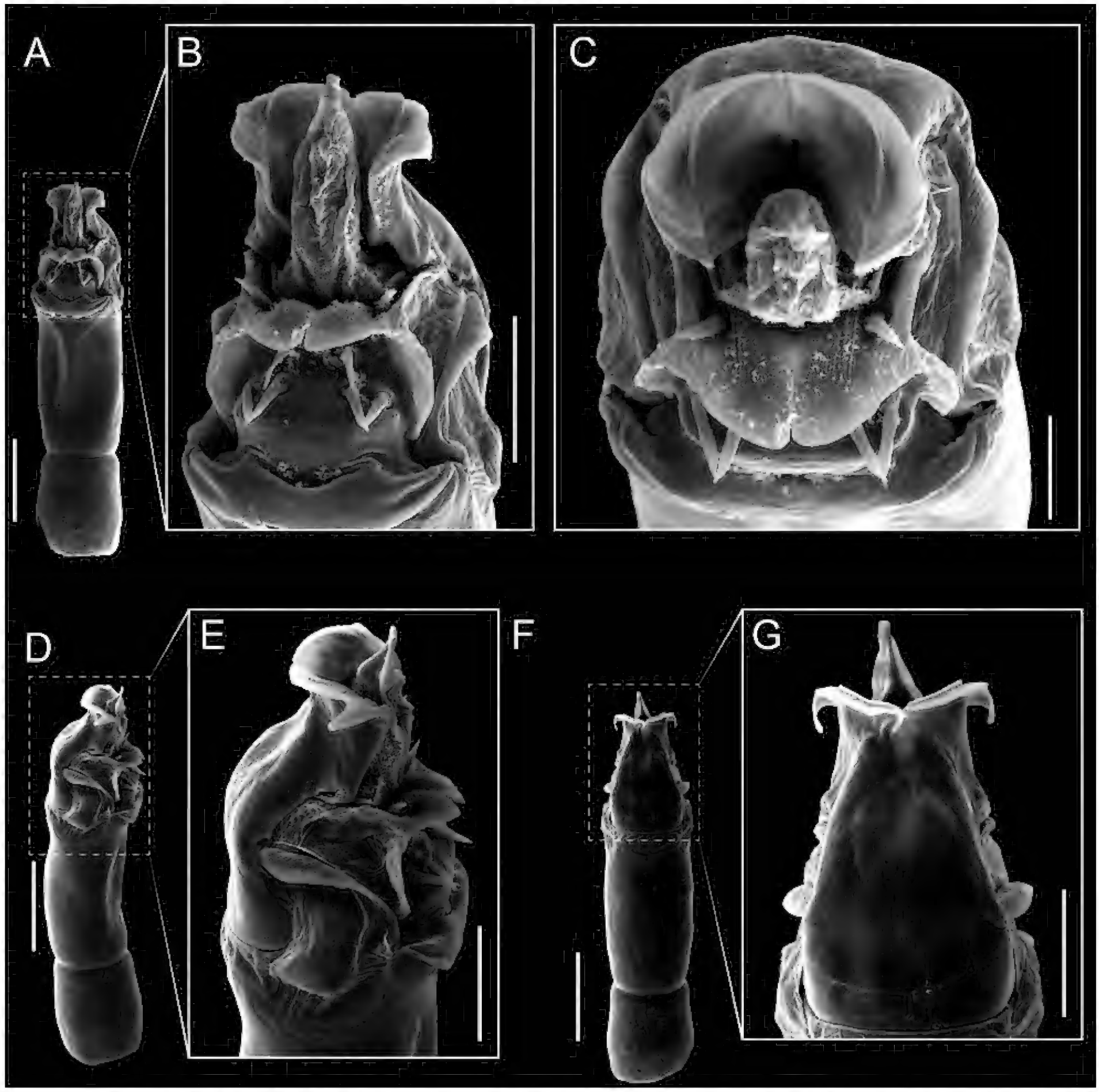

Figure 54. *Chilenuncia rostrata* comb. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 100 µm (**B, E, G**); 50 µm (**C**).

tae, with two distal setiferous granules and three dorsoproximal tubercles with subdistal setae. Mesal surface of femora with 2–3 distal setiferous granules. Patella with a ventral setiferous tubercle. Tibia with four ectal and three mesal spines with subdistal setae, while the ventral surface presents small setiferous granules. Tarsus with three mesal and four ectal spines with subdistal setae, as well as a few setae and granules.

Legs (Fig. 53). Coxa I with a row of setiferous tubercles, with two distal setiferous tubercles with subdistal setae. Coxae II–III also with setiferous tubercles, while Coxa IV with only microgranulation. Four bridges between legs II and III, and five or six bridges between legs III and IV. Spiracles not obstructed by bridges. A smooth surface covers ~ ⅓ of leg II, ¾ of leg III, and < ⅓ of leg IV. Within the smooth area of leg II, two small tubercles with subdistal

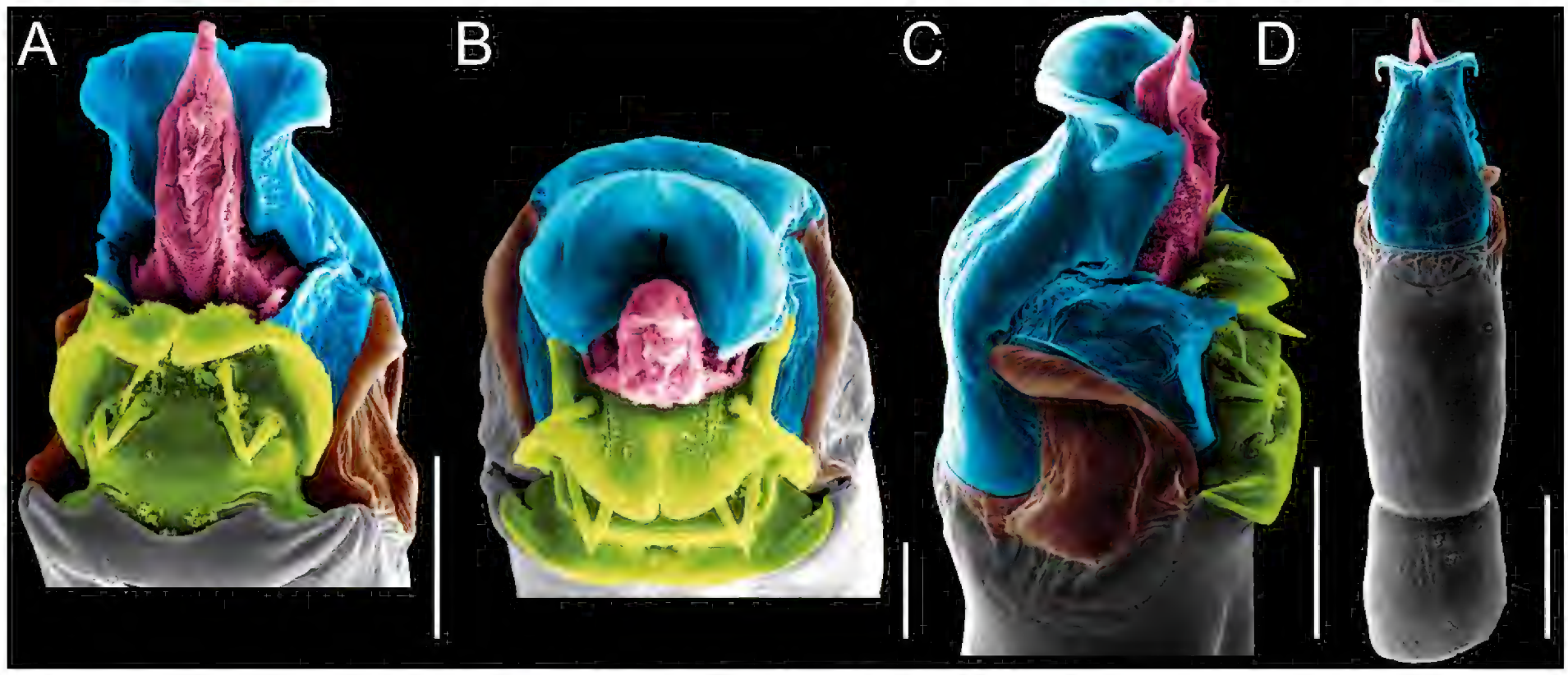

Figure 55. *Chilenuncia rostrata* comb. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 μm (**A, C, D**); 50 μm (**B**).

setae can be observed on each side. Sternum arrow-shaped, with a triangular posterior area. Smooth, covered in setae, without a notch on tarsus I. Tarsal count 4–7–4–4.

Penis (Figs 54, 55). Pars distalis with large ventral cleft that divides the plate into two lamellae. Each lamella with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa covers dorsal and lateral surfaces, exhibiting a small medial notch that divides the apical region of the capsula externa. With a dorsolateral plate attached to the pars basalis. Capsula interna slightly longer than capsula externa and partially covers the ventral plate. Capsula interna sac-shaped in appearance.

Female. Similar to male, with shorter pedipalpal femora and interocular apophysis.

Female measurements. Total length 3.17. Carapace length 0.98, dorsal scutum length 2.12, carapace max. width 1.38, mesotergum max. width 2.08. Appendage measurements: Pedipalps. Trochanter length 0.21, femora length 0.83, patella length 0.45, tibia length 0.59, tarsus length 0.62. Leg I: trochanter (tr) 0.23, femora (fe) 0.84, patella (pa) 0.52, tibia (ti) 0.69, metatarsus (mt) 0.82, tarsus (ta) 0.64. II: tr 0.30, fe 1.13, pa 0.52, ti 0.89, mt 0.92, ta 1.23. III: tr 0.30, fe 0.73, pa 0.40, ti 0.72, mt 0.79, ta 0.73. IV: tr 0.30, fe 1.13, pa 0.60, ti 0.90, mt 1.27, ta 0.93. Tarsal count: 3–6–4–4.

Genus *Laftrachia* gen. nov.

https://zoobank.org/4BE5CC16-9A40-4F4C-A0EB-7632F000E1F5

Figs 56–61

Etymology. The specific epithet derives from Laftrache (which in Mapudungun, Mapuche Language, means “little people”) also known as Caftranche, a mythical being present in Mapuche mythology. Feminine grammatical gender.

Diagnosis. This monotypic genus is characterized by its small size, yellow-orange coloration, a prominent ectal-distal process on the pedipalp femora, a low

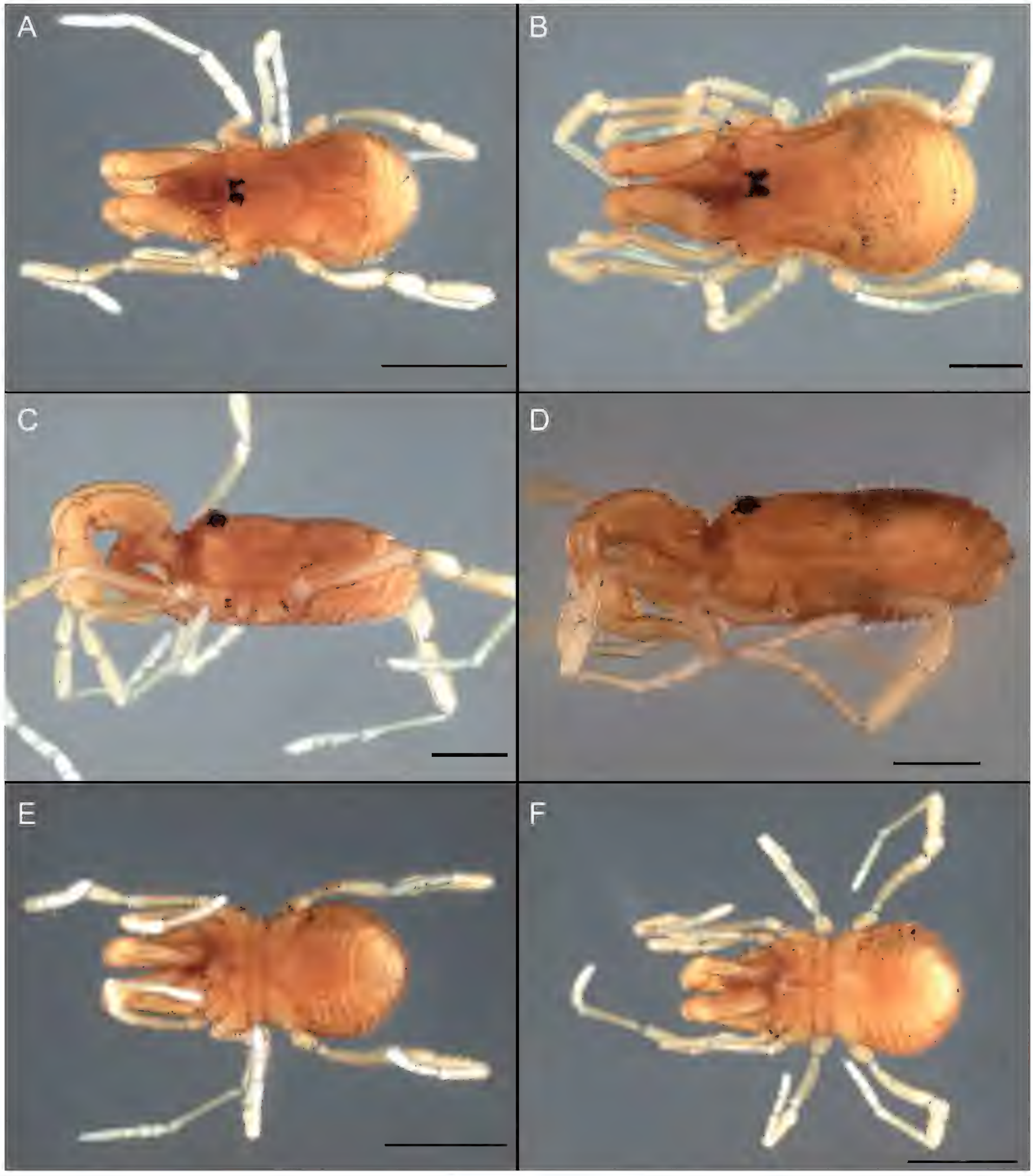

Figure 56. *Laftrachia robin* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 500 μm. Species of Clade C, see Fig. 3.

ocularium, and distinct male genital morphology. The male genitalia exhibits an arc-shaped ventral plate and a pair of parallel projections within the capsula interna. These distinguishing features differentiate it from other genera within the family Triaenonychidae.

Type species. *Laftrachia robin* sp. nov.

Included species. *Laftrachia robin* sp. nov.

Distribution. Chile: Bío-Bío Region (Fig. 4D).

***Laftrachia robin* sp. nov.**
https://zoobank.org/2BBB0B84-397C-4384-B5A9-3B8A73478123
Figs 56–61

Material examined. ***Holotype*.** ♂ **Chile.** Arauco: San Alfonso, Quebrada Caramávida, Arauco Reserve, 37.70942°S, 73.17107°W, 750 m, M. Ramírez, A. Ojanguren, A. Pérez-González, G. Azevedo, W. Porto coll., 15.I.2018 (MNHNCL). ***Paratypes*. Chile.** Arauco: San Alfonso, Quebrada Caramávida, Arauco Reserve, 37.70942°S, 73.17107°W, 750 m, M. Ramírez, A. Ojanguren, A. Pérez-González, G. Azevedo, W. Porto coll., 15.I.2018, 1 ♂ 6 ♀ (MACN).

Etymology. The species name, a noun in apposition, is a reference to the DC comics character "Robin" (https://www.dccomics.com/characters/robin). The black pigmentation in the eye region of the species is similar to the mask used by the character in his appearances.

Description of male. Measurements: Total length 1.65, carapace length 0.66, dorsal scutum length 1.28, max. carapace width 0.87, max. dorsal scutum width 1.14. Appendage measurements: Pedipalps. Trochanter length 0.18, femora length 0.88, patella length 0.30, tibia length 0.51, tarsus length 0.50. Leg I: trochanter (tr) 0.16, femora (fe) 0.56, patella (pa) 0.29, tibia (ti) 0.42, metatarsus (mt) 0.37, tarsus (ta) 0.46. II: tr 0.17, fe 0.75, pa 0.32, ti 0.53, mt 0.82, ta 0.57. III: tr 0.18, fe 0.51, pa 0.21, ti 0.27, mt 0.44, ta 0.50. IV: tr 0.22, fe 0.69, pa 0.39, ti 0.57, mt 0.67, ta 0.73.

Dorsum (Fig. 56, 57). Eta (η) hourglass-shaped dorsal scutum. Ocularium low, lacking a medial spine. Carapace covering ~ ½ of the dorsal scutum, displaying furrows on the posterior area and distinct lateral edges. Free tergites with a smooth surface.

Chelicerae (Fig. 58A, B). Segment I characterized by the presence of five ventral tubercles and three dorsal tubercles, all adorned with subdistal setae. Segment II with a total of 11 ectal tubercles, five mesal tubercles, and approximately seven frontal tubercles.

Pedipalps (Fig. 58C, D). Trochanter with a dorsal tubercle. Femora with a row of four ventral tubercles, a row of dorsal tubercles adorned with subdistal setae, and a long distal ectal apophysis. Patella with a pair of small ventral tubercles with setae. Tibia with two ventral rows of tubercles, with three small tubercles and two setiferous tubercles on the mesal side, and a row of six small setiferous tubercles on the ectal side. Tarsus equipped with three tubercles featuring ectal and mesal subdistal setae.

Legs (Fig. 59). Coxa I with four small proximal tubercles, one medial tubercle with subdistal setae, and three distal tubercles (two small and one with subdistal seta). Coxa II with scattered small tubercles with setae. Coxae III and IV smooth, while the cerotegument covers the distal portion of leg III and almost the entire leg IV. Bridge is present. Spiracles visible. Sternum arrow-shaped. Trochanter of leg I and femora of legs I and II covered in small tubercles with setae. Tibia of leg IV covered with small tubercles with setae. Metatarsus-tarsus of all legs densely setose. Tarsus occupies almost the entire length of metatarsus. Tarsal count: 3–4–3–4.

Penis (Figs 60, 61). Pars distalis with an arcuate ventral plate without a cleft, characterized by three ventral and one dorsal macrosetae each side. Capsula

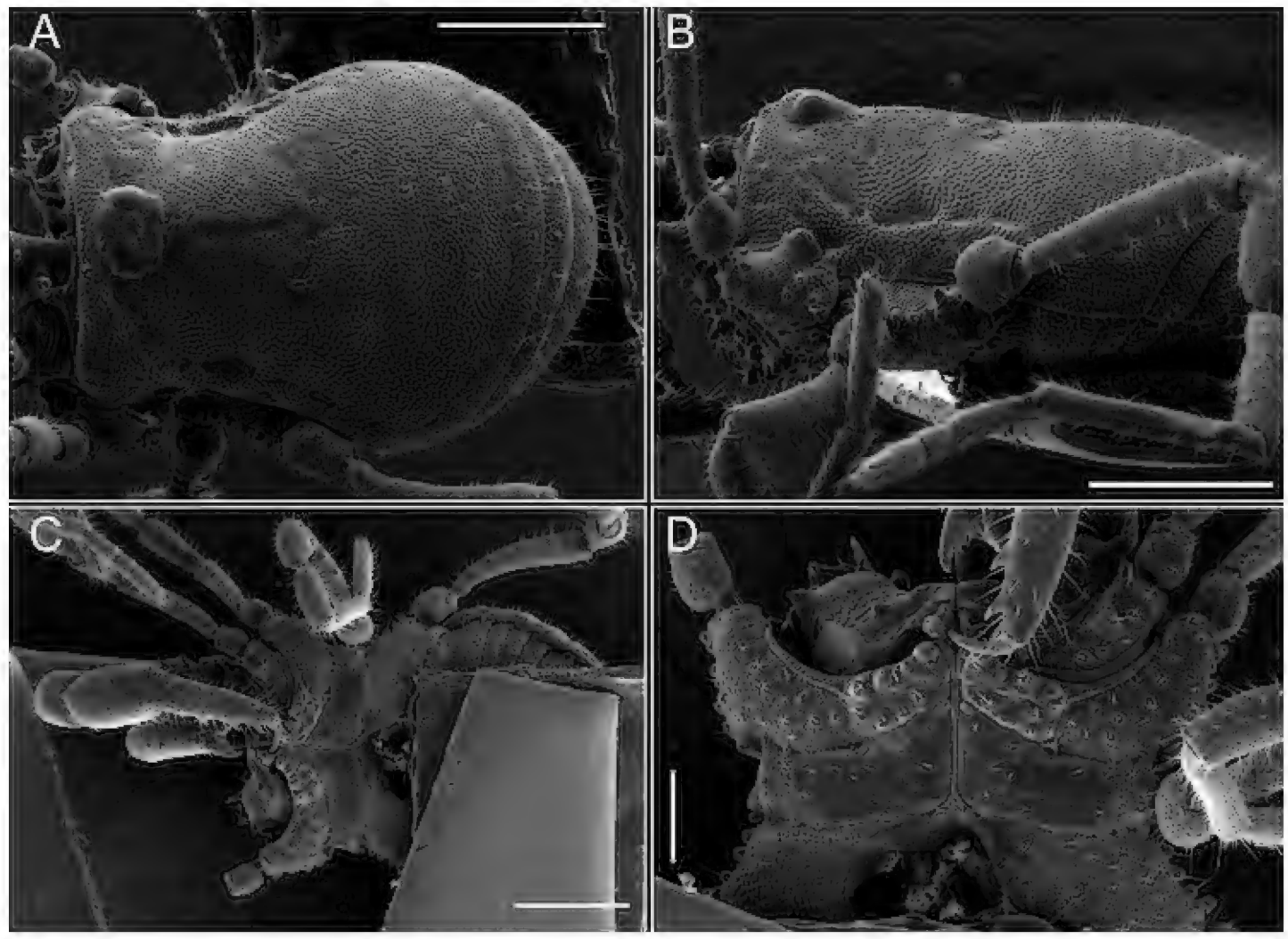

Figure 57. *Laftrachia robin* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

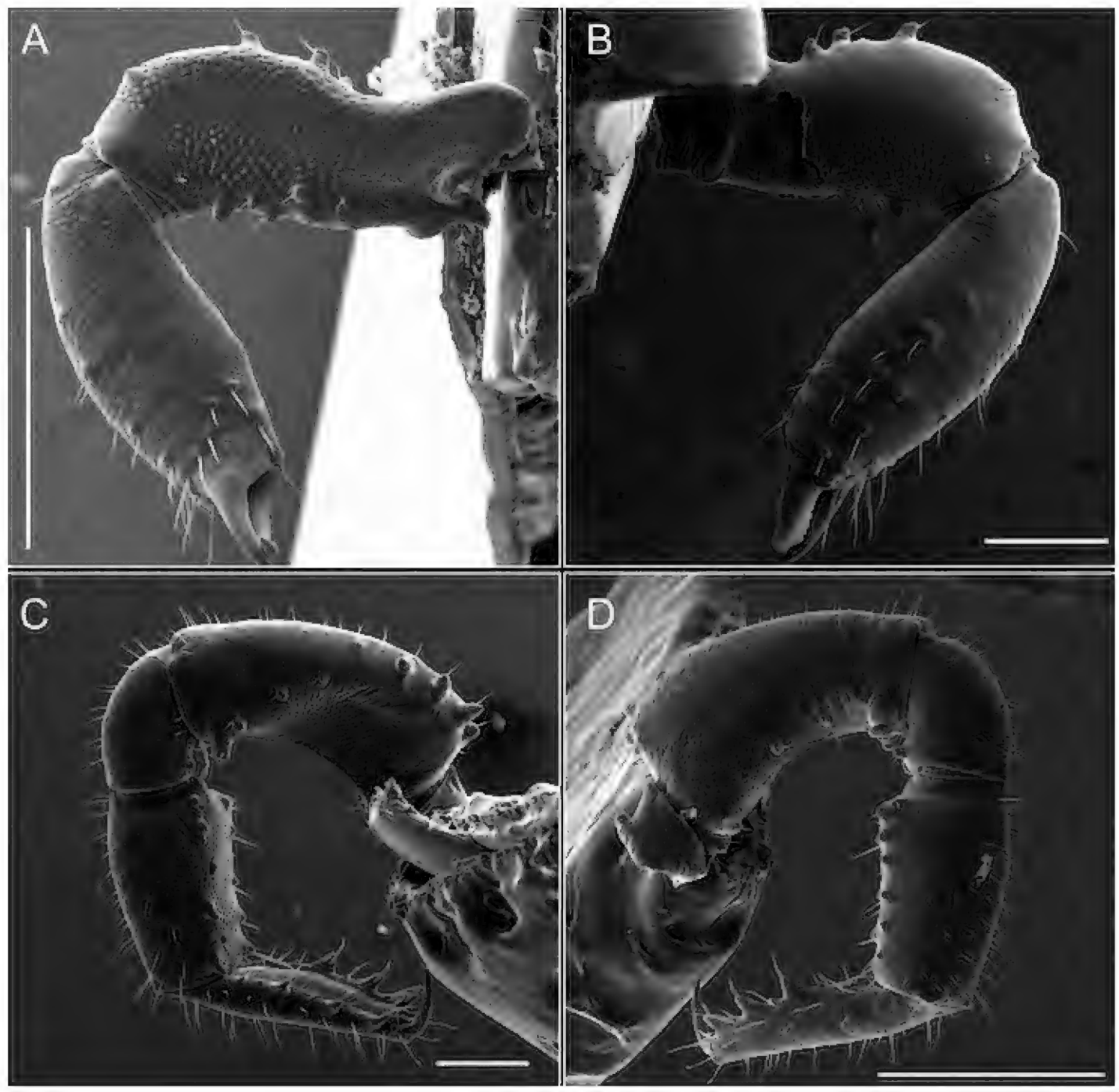

Figure 58. *Laftrachia robin* sp. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 500 μm.

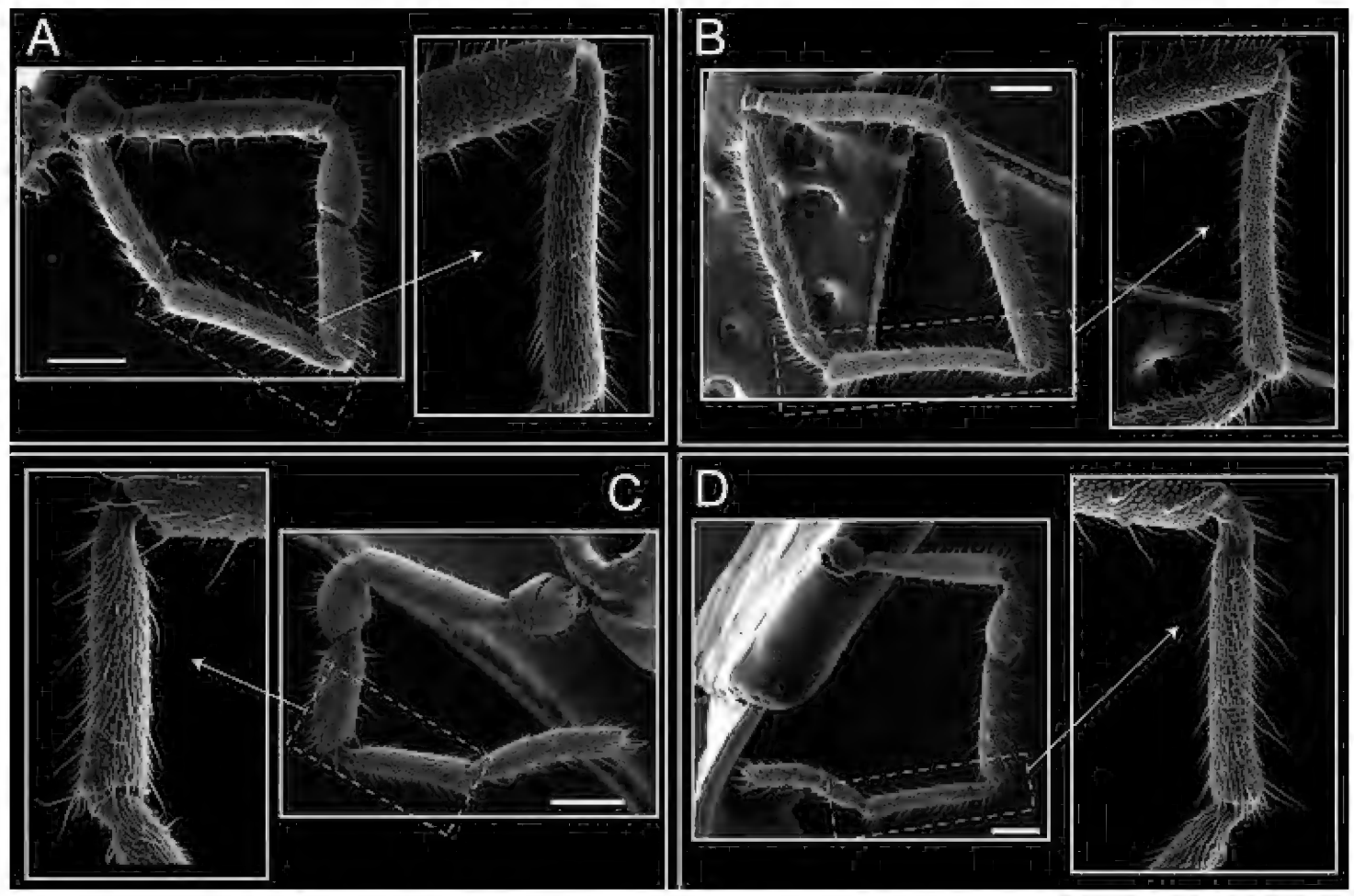

Figure 59. *Laftrachia robin* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm.

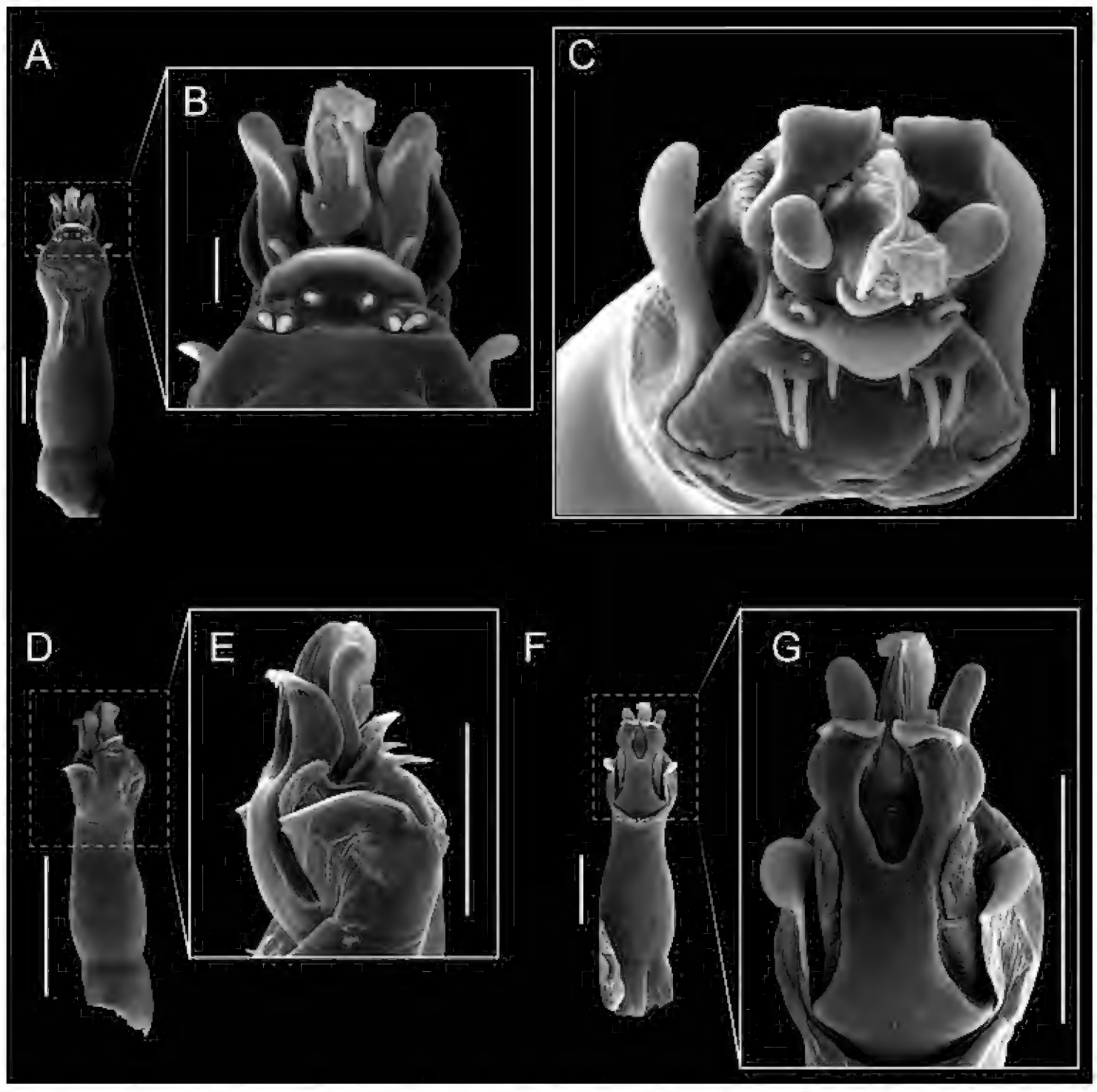

Figure 60. *Laftrachia robin* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 100 μm (**A, D, E, F**); 20 μm (**B, C**); 50 μm (**G**).

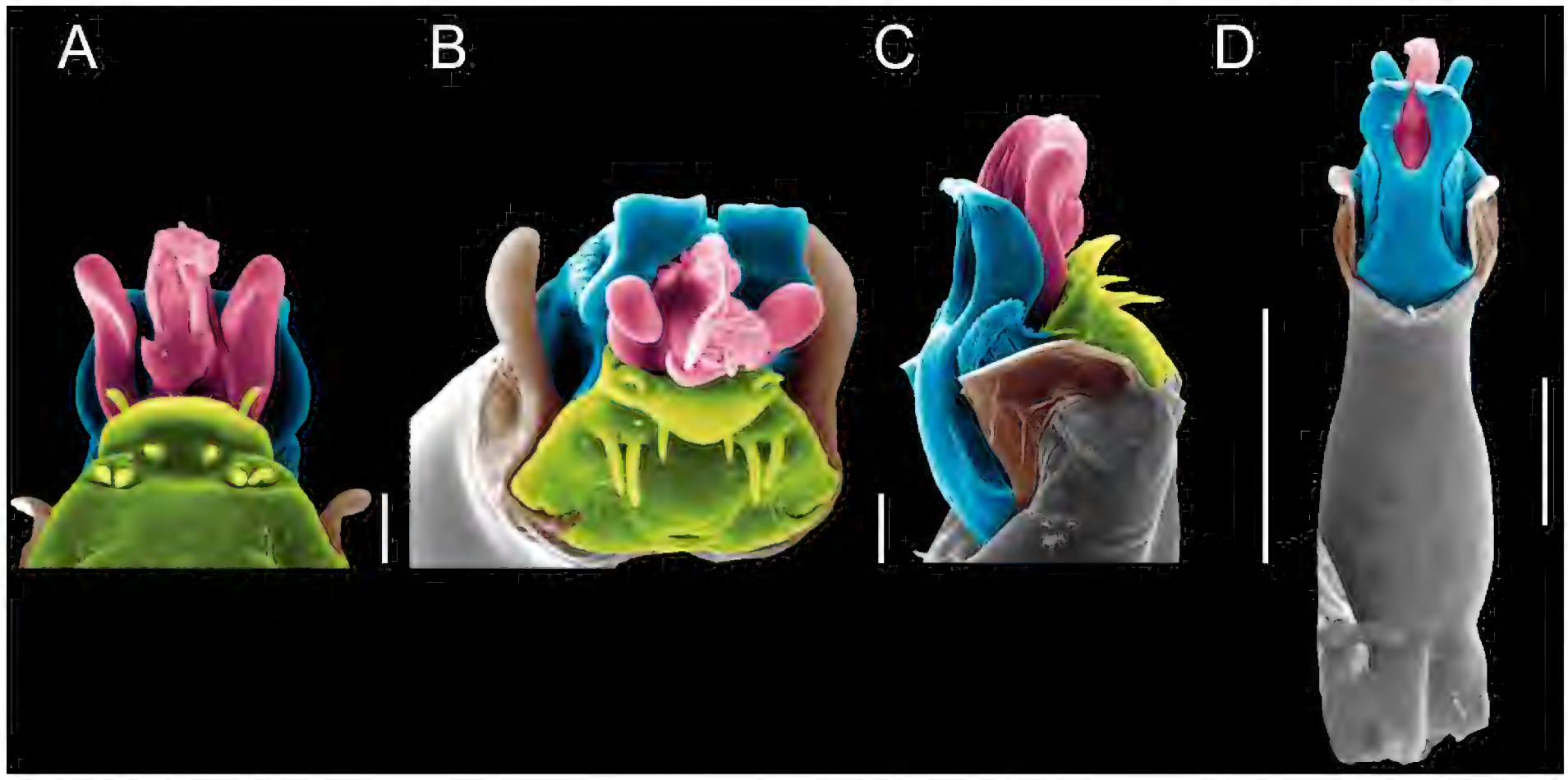

Figure 61. *Laftrachia robin* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 20 μm (**A, B**); 100 μm (**C, D**).

externa shorter than capsula interna and with a dorsal cleft that divides it into two dorsal halves. Additionally, there are lateral folds present on each side, and a dorsolateral plate surrounds the capsula externa. Capsula interna trifid, with two lateral processes running parallel to stylus. Stylus membranous and shaped like an inflatable bag.

Female. Similar to male, but with certain differences: pedipalps are shorter, lacks ectal-distal apophysis present on pedipalp femora of male.

Female measurements. Total length 1.75, carapace length 0.71, dorsal scutum length 1.46, carapace max. width 0.84, mesotergum max. width 1.23. Appendage measurements: Pedipalps. Trochanter length 0.17, femora length 0.63, patella length 0.34, tibia length 0.46, tarsus length 0.45. Leg I: trochanter (tr) 0.12, femora (fe) 0.57, patella (pa) 0.31, tibia (ti) 0.38, metatarsus (mt) 0.48, tarsus (ta) 0.44. II: tr 0.17, fe 0.80, pa 0.35, ti 0.51, mt 0.77, ta 0.80. III: tr 0.18, fe 0.47, pa 0.25, ti 0.32, mt 0.44, ta 0.50. IV: tr 0.22, fe 0.72, pa 0.38, ti 0.53, mt 0.66, ta 0.60.

Genus *Lautaria* gen. nov.

https://zoobank.org/DBD404FC-68B8-4EE6-8BB9-8E58588C2867

Figs 62–67

Etymology. The genus name honors Lautaro (Leftraru), a renowned toqui (Mapuche military leader) who played a significant role in the Arauco War during the early stages of the Spanish conquest of what is now Chile. The name is derived from Mapudungun, with “lef” meaning “fast” and “traru” or “bald traro.” The feminine grammatical gender is used for the generic epithet.

Diagnosis. *Lautaria* can be distinguished from all other genera of Triaenonychidae by the unique male genital morphology (Fig. 66, 67). This

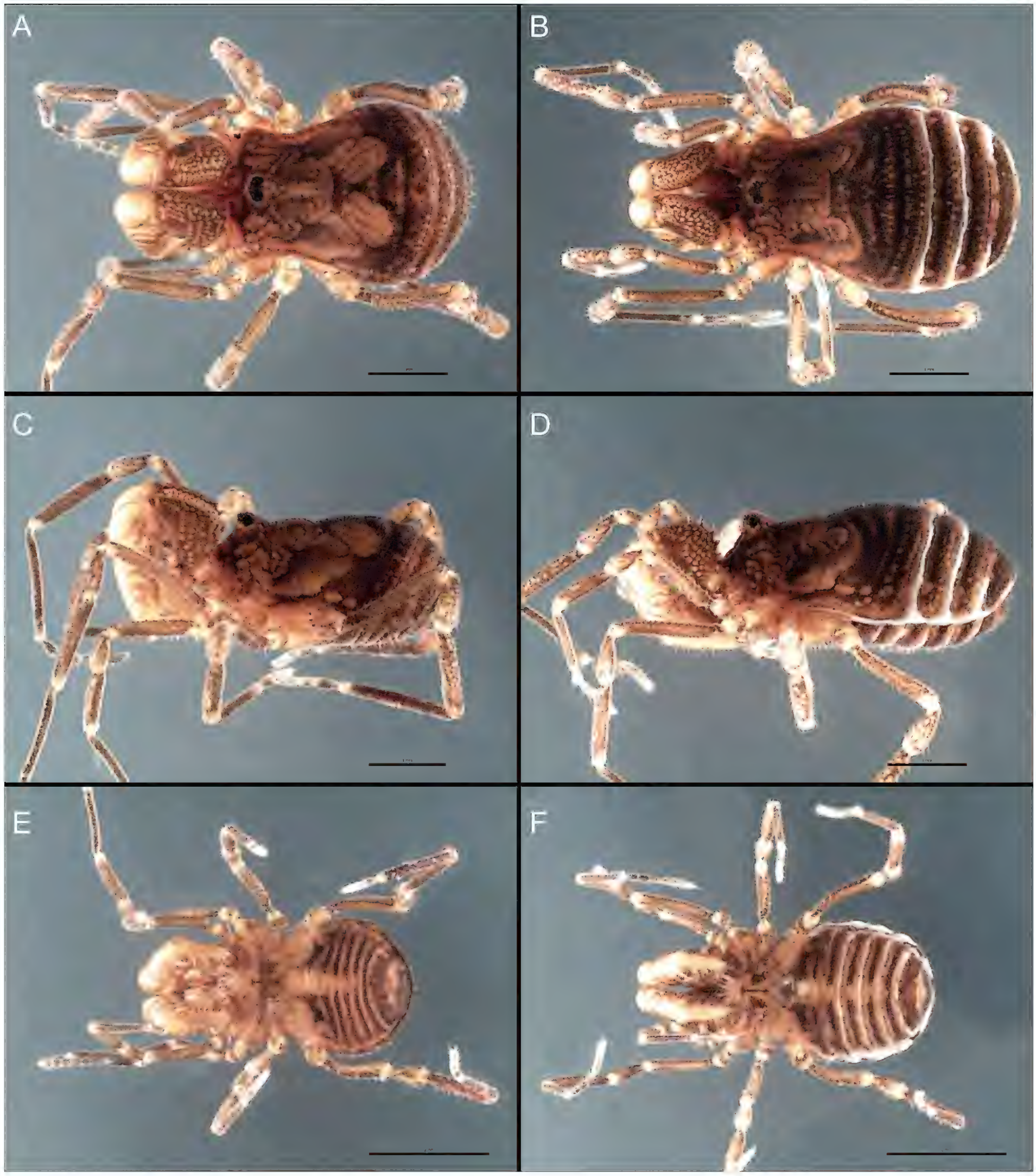

Figure 62. *Lautaria ceachei* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 500 µm. Species of Clade C, see Fig. 3.

includes a capsula externa with an apical region divided into two halves, forming a 90° angle in relation to the axis of the pars basalis. The external morphology exhibits striking similarities to the genus *Chilenuncia*, and other members of clade C.

Type species. *Lautaria ceachei* sp. nov.

Included species. *Lautaria ceachei* sp. nov.

Distribution. Chile: Ñuble Region (Fig. 4E).

***Lautaria ceachei* sp. nov.**

https://zoobank.org/B1D033C3-2192-4672-B2B9-517D1CA30851

Figs 62–67

Material examined. *Holotype*. ♂ **Chile.** Altos del Lircay RN, E Vilches Alto, 35.5987°S, 71.04097°W, 1380 m, M. Ramírez, A. Ojanguren, A. Pérez-González, G. Azevedo, W. Porto coll. (MNHNCL). ***Paratypes*. Chile.** Altos del Lircay RN, E Vilches Alto, 35.5987°S, 71.04097°W, 1380 m, M. Ramírez, A. Ojanguren, A. Pérez-González, G. Azevedo, W. Porto coll. 15.I.2018, 1 ♂ 4 ♀, 2 imm. (MACN).

Etymology. The specific epithet "ceachei" is derived from the chanted cry "ceacheí," commonly used during sporting events to cheer on Chilean representatives. This Chileanism is created by combining the initial letters of the word "Chile." The epithet serves as noun in apposition, highlighting the connection to Chilean representation and support.

Description of male. Measurements: Total length 2.49. Carapace length 1.14, dorsal scutum length 2.20, carapace max. width 1.63, mesotergum max. width 2.45. Appendage measurements: Pedipalps. Trochanter length 0.30, femora length 0.90, patella length 0.60, tibia length 0.71, tarsus length 0.70. Leg I: trochanter (tr) 0.27, femora (fe) 0.95, patella (pa) 0.54, tibia (ti) 0.83, metatarsus (mt) 1.08, tarsus (ta) 0.61 II: tr 0.32, fe 1.42, pa 0.61, ti 1.10, mt 1.36, ta 0.61. III: tr 0.38, fe 0.95, pa 0.54, ti 0.81, mt 1.02, ta 0.73. IV: tr 0.39, fe 1.41, pa 0.73, ti 1.16, mt 1.49, ta 0.87.

Dorsum (Fig. 62, 63). Eta (η) hourglass-shaped dorsal scutum, characterized by its distinctive form. Ocularium low and rounded, with an acute small apophysis.

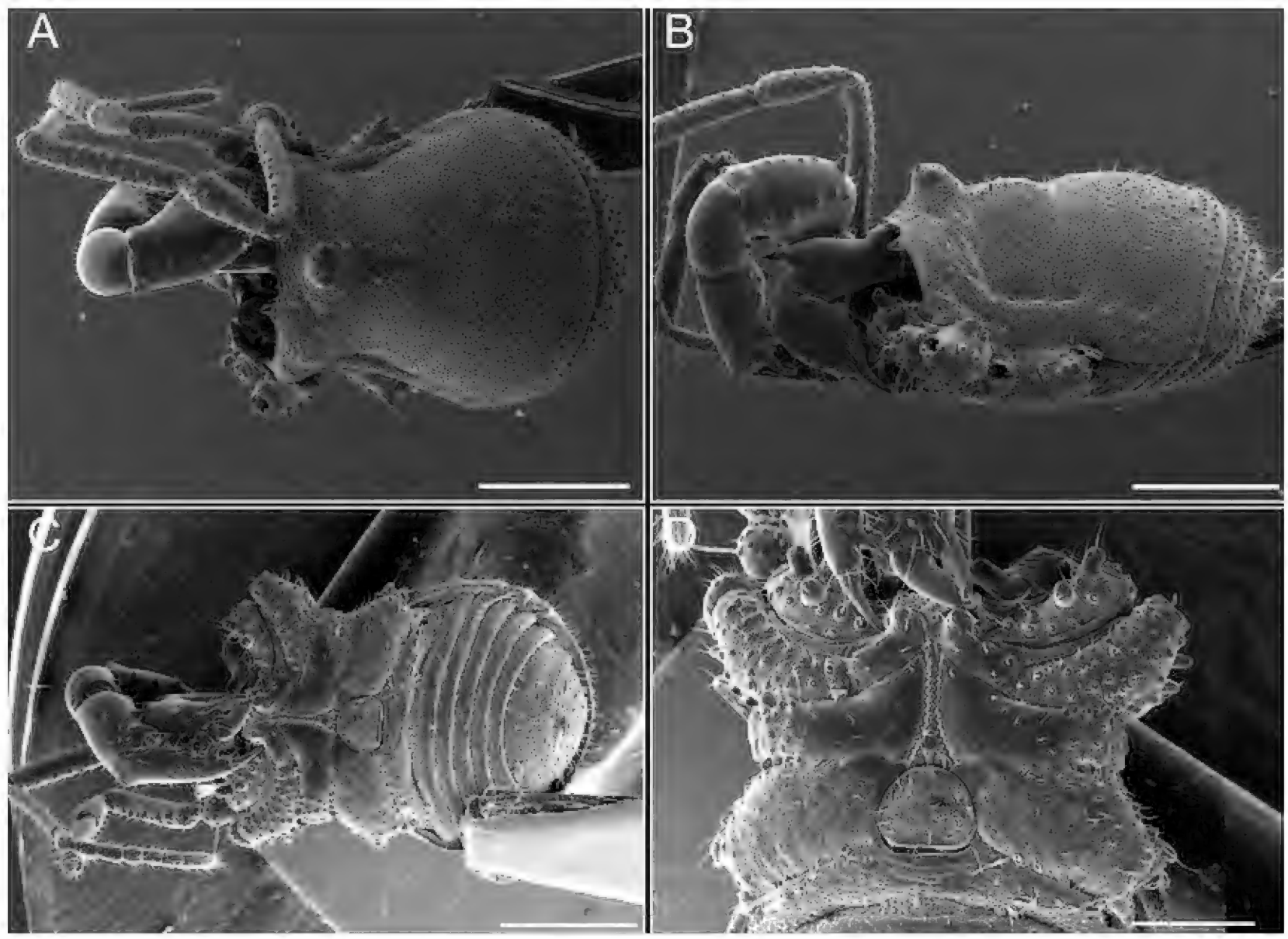

Figure 63. *Lautaria ceachei* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 µm (**D**).

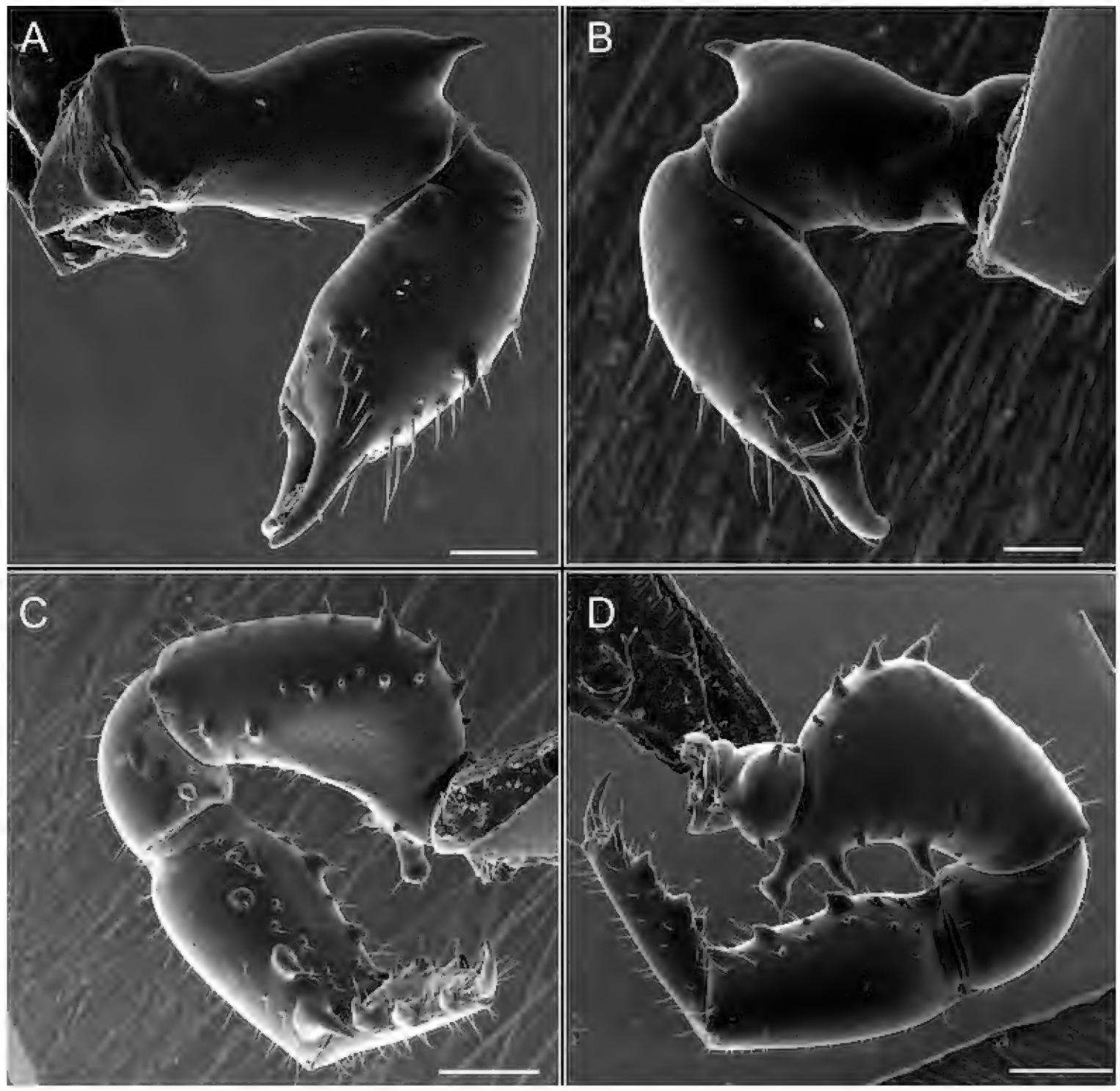

Figure 64. *Lautaria ceachei* sp. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

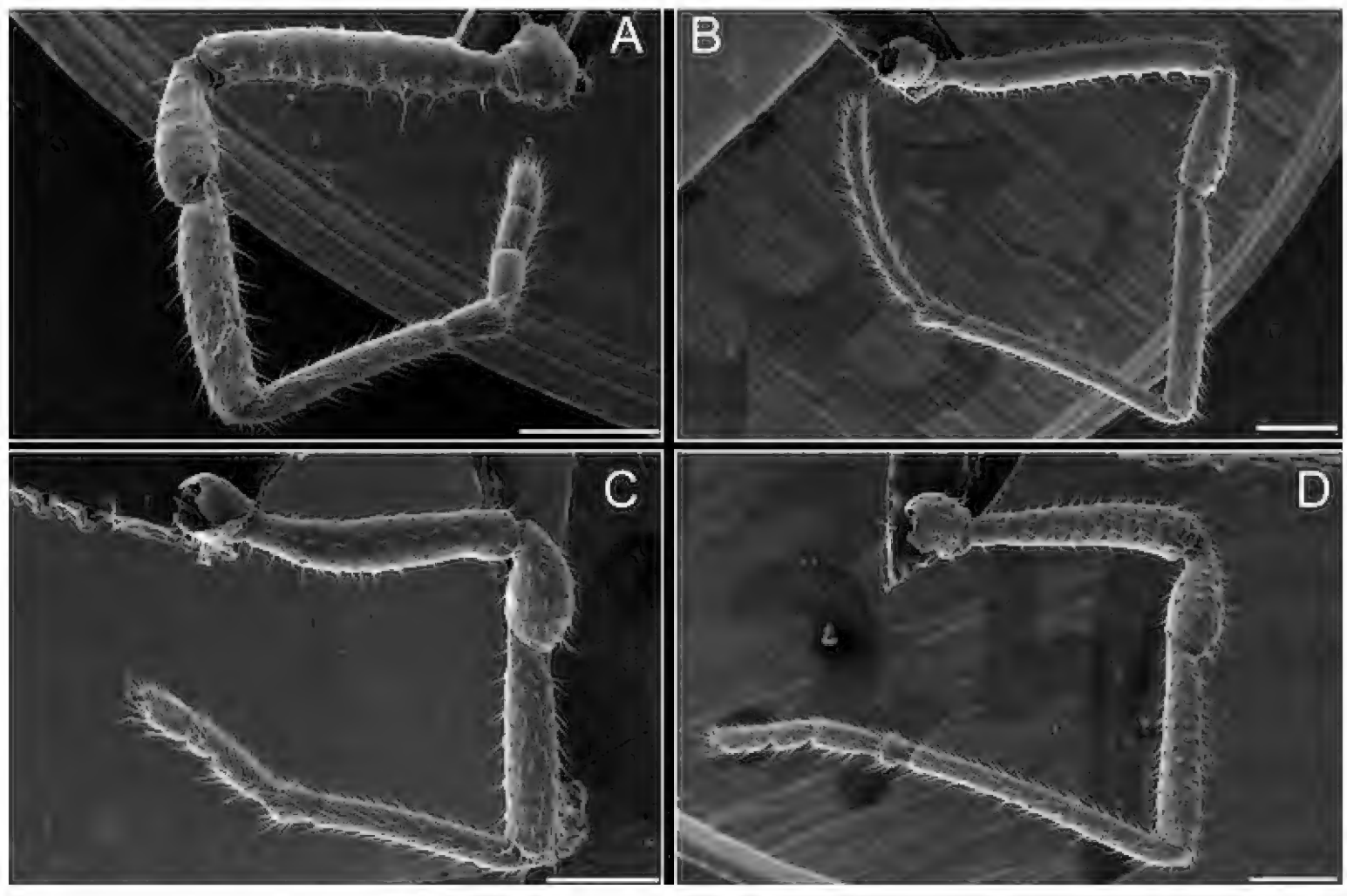

Figure 65. *Lautaria ceachei* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 μm.

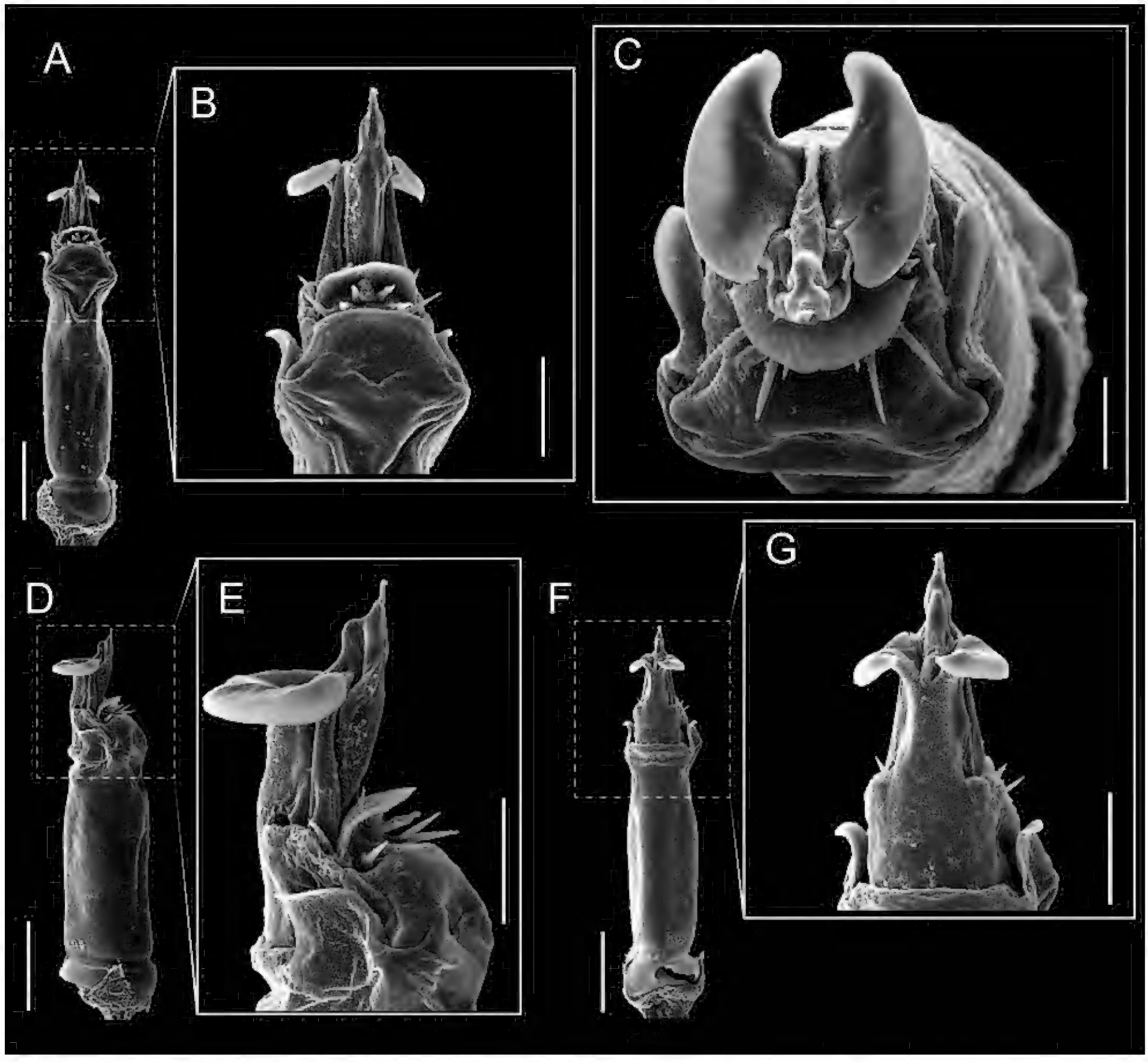

Figure 66. *Lautaria ceachei* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 100 µm (**B, E, G**); 50 µm (**C**).

Both the dorsal scutum and free tergites covered with microgranulation, providing a textured surface. Mesotergal areas without clear separation but with small setiferous tubercles, with a stronger presence in the mesotergum and free tergites.

Chelicerae (Fig. 64A, B). Segment I of with a sharp spine on the dorso-distal surface, with three small ventral-proximal tubercles. Segment II with scattered setae in both ectal and ventral views, and in front view, with a triangular tubercle that stands out from the others.

Pedipalps (Fig. 64C, D). Trochanter with a small dorsal and a ventral tubercle. Femora with two parallel rows of dorso-mesal tubercles, with three ventral spines and a few setiferous tubercles. Patella with a mesal tubercle. Tibia with three ventral-ectal spines, two ventral-mesal spines, and small scattered ventral tubercles.

Legs (Fig. 65). Coxa I characterized by having 9–10 setiferous tubercles, the two apical ones being stronger and more prominent than the others. Coxa II

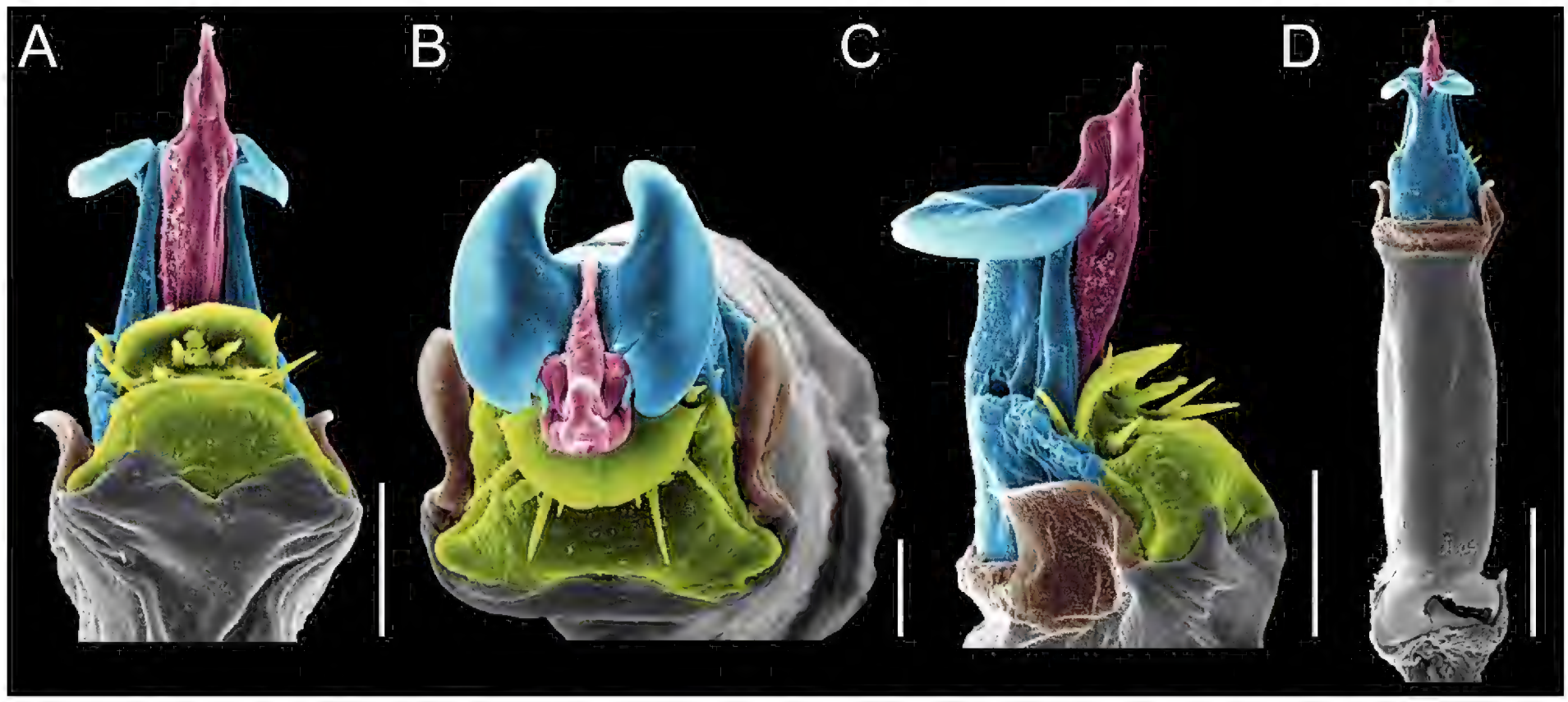

Figure 67. *Lautaria ceachei* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 1 mm.

with a higher number of setiferous tubercles, ranging from 20 to 25. Coxa III with 12–14 tubercles, while coxa IV has five or six small tubercles. Spiracles not obstructed. A smooth surface covers ~1/3 of leg II, ¾ of leg III, and < 1/3 of leg IV. Sternum arrow-shaped. Legs covered in small tubercles. Astragalus longer than the calcaneus on all legs. Tarsal count: 3–6–4–4.

Penis (Figs 66, 67). Pars distalis with a ventral plate and a small cleft, dividing it into two lamellae. Each lamella with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa lower than the capsula interna, with a notch in the apical part, dividing into two lateral apical "wings". With an additional dorsolateral plate. Capsula interna thin and laterally flattened, with a sharp apical area.

Female. Similar to male but with shorter pedipalpal femora and a reduced interocular process.

Female measurements: Total length 2.98. Carapace length 1.11, dorsal scutum length 2.39, carapace max. width 1.66, mesotergum max. width 2.46. Appendage measurements: Pedipalps. Trochanter length 0.33, femora length 1.09, patella length 0.53, tibia length 0.81, tarsus length 1.05. Leg I: trochanter (tr) 0.22, femora (fe) 1.09, patella (pa) 0.50, tibia (ti) 0.86, metatarsus (mt) 1.06, tarsus (ta) 0.63 II: tr 0.24, fe 1.42, pa 0.60, ti 1.12, mt 1.35, ta 1.17. III: tr 0.27, fe 1.06, pa 0.47, ti 0.86, mt 1.01, ta 0.62. IV: tr 0.37, fe 1.43, pa 0.72, ti 1.16, mt 1.42, ta 0.85.

Genus *Nerudiella* gen. nov.

https://zoobank.org/DF572280-150A-44D7-9964-2B1E2749F912

Figs 68–159

Nuncia [part] (references to *Nuncia americana*): Roewer 1961: 102, pl. 19, figs 13–15; Cekalovic 1968: 6; Besch 1969: 733; Muñoz-Cuevas 1971a: 873, fig. 28; Kury 2003: 21.

Nuncia (*Nuncia*) *americana*: Muñoz-Cuevas 1971b: 98, figs 1–17; Cekalovic 1985:11.

Etymology. The generic epithet *Nerudiella* honors renowned Chilean poet and politician Pablo Neruda (1904–1973). Feminine grammatical gender.

Diagnosis. *Nerudiella* species can be easily distinguished from other genera of Triaenonychidae by several notable characteristics. These include a relatively low to medium ocularium, which lacks an interocular apophysis or possesses a reduced apophysis (similar to that of the New Zealand *Nuncia*); a pedipalpal femora typically slightly curved; and presence of a subtle sexual dimorphism. The most salient feature is the male genitalia with a distinctive dorsolateral plate that originates from the genitalia's pars basalis and extends onto the pars distalis. This plate appears wide in its lateral portion but small in dorsal view. These unique genital structures serve as reliable markers for the identification of *Nerudiella* species.

Type species. *Nuncia americana* Roewer, 1961

Included species. *Nerudiella americana* (Roewer, 1961) comb. nov., *Nerudiella cachai* sp. nov., *Nerudiella caramavida* sp. nov., *Nerudiella cautin* sp. nov., *Nerudiella choapa* sp. nov., *Nerudiella curi* sp. nov., *Nerudiella goroi* sp. nov., *Nerudiella jaimei* sp. nov., *Nerudiella malleco* sp. nov., *Nerudiella penco* sp. nov., *Nerudiella pichi* sp. nov., *Nerudiella portai* sp. nov., *Nerudiella quenes* sp. nov., *Nerudiella vilches* sp. nov., *Nerudiella wekufe* sp. nov., *Nerudiella zapallar* sp. nov.

Distribution. Chile: From Coquimbo to Los Lagos Region (Fig. 4F).

Nerudiella americana (Roewer, 1961), comb. nov.

Figs 68–73

Nuncia americana Roewer 1961: 102, pl. 19, figs 13–15; Cekalovic 1968: 6; Besch 1969: 733; Muñoz-Cuevas 1971a: 873, fig. 28; Kury 2003: 21.

Nuncia (*Nuncia*) *americana*: Muñoz-Cuevas 1971b: 98, figs 1–17; Cekalovic 1985: 11; Pérez-Schultheiss et al. 2021: 410, fig. 2c, f.

Material examined. ***Paratypes*. Chile.** Chepu Peninsula, Chiloé, mixed woodland shrubs, 1 ♂, 1 ♀ (SMF RII/13414).

Additional material. Chile. Chiloé: Lago Huillinco, M. Ramírez, M. Izquierdo, P. Michalik, C. Wirkner, K. Huckstorf coll., 16.II.2012, 12 imm. (MACN), 5 km of Quellón, N. Platnick, R.Schuh coll., 01.XII.1981, 4 ♂ 8 ♀ 26 imm. (AMNH), Isla Chiloé, R.Schuh, N. Platnick coll., 29.XI.1981, 4 ♂ 3 ♀ 2 imm. (AMNH), Cruce a Coinco, T.Cekalovic coll., 14.II.1983, 3 ♂ 2 ♀ 6 imm. (MACN); Mocopulli, T.Cekalovic coll., 20.II.1986, 1 ♂ 3 ♀ 5 imm. (MACN), Isla Chiloé, T.Cekalovic coll., 02.II.1983, 6 ♂ 5 ♀ 8 imm. (MACN); Isla Chiloé, T.Cekalovic coll., 26.II.1972, 3 imm. (MACN), Piruquina, T.Cekalovic coll., 26.II.1976, 1 ♂ 1 ♀ 1 imm. (MACN), Crossroad to San Pedro, T.Cekalovic coll., 27.II.1976, 4 imm. (MACN), Piruquina, T. Cekalovic coll., 10.II.1981, 2 ♂ 2 ♀ 1 imm. (MACN), same collector, 19.II.1983, 3 imm. (MACN); Chepu, 15 m, N. Platnick, O. Francke coll., 02.02.1985, 1 ♂ 2 imm. (AMNH); 15 km N. Chepu, M. Ramírez coll., 03.02.1991, 3 imm. (MACN), 15 km S de Chepu, M. Ramírez coll., 20.02.1991, 1 imm. (MACN), Lago Huillinco, M. Ramírez, M. Izquierdo, C. Wirkner, K. Huckstorf coll.,

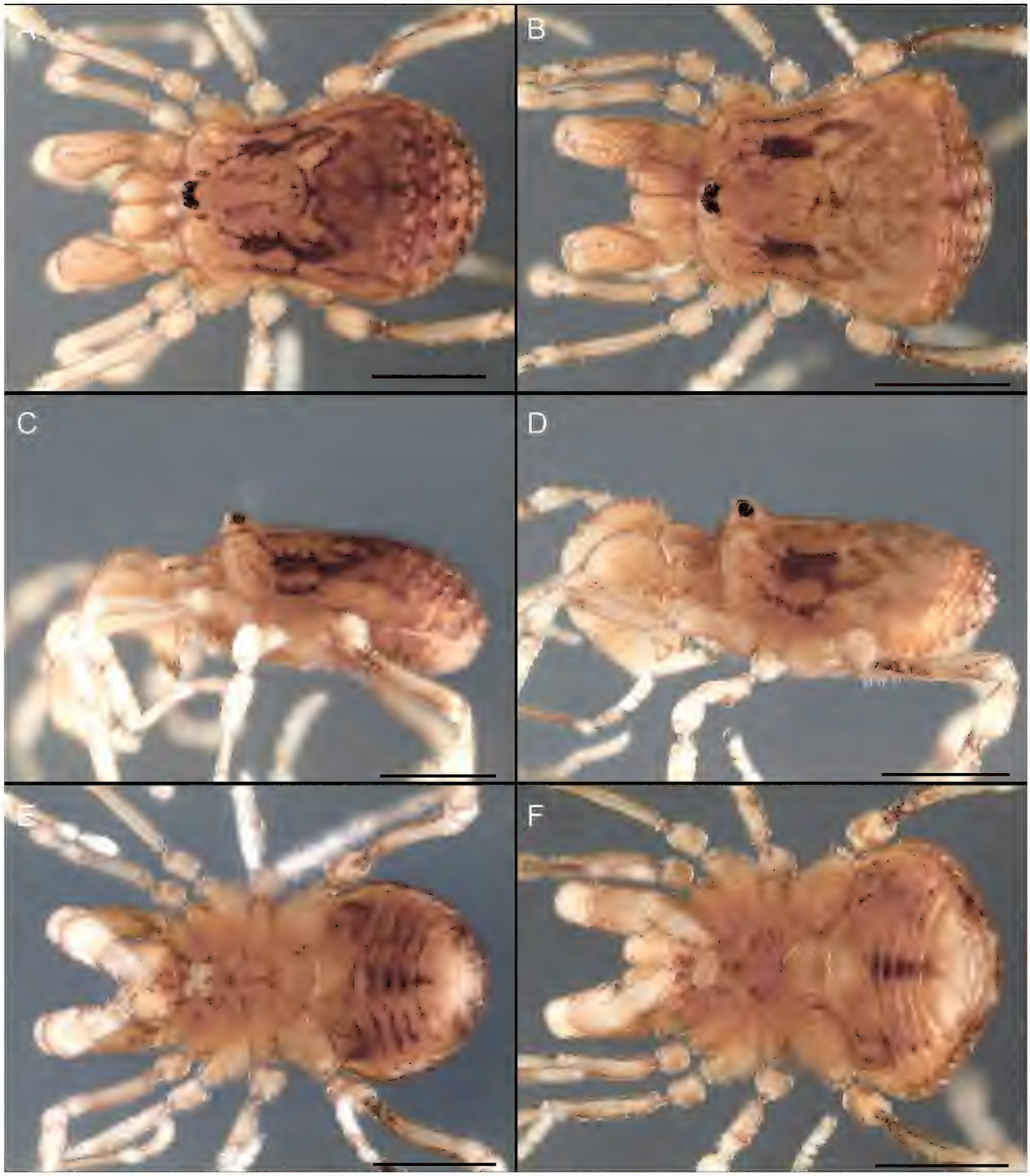

Figure 68. *Nerudiella americana* comb. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

15.ii.2012, 1 ♂ (MACN), Chilloé island, 5 km N of Quellón, R.Schuh, N. Platnick coll., 01.12.1981, 1 imm. (AMNH), 8 km Ancud, Isla Chiloé, N. Platnick, O. Francke coll., 01.02.1985, 6 ♀ 22 imm. (AMNH), Isla Chiloé, 8 km S Ancud, S.Peck, J.Peck coll., 01.02.1985, 8 ♂ 5 ♀ 21 imm. (AMNH), 5 km N of Quellón, N. Platnick, R.Schuh coll., 01.12.1981, 1 ♂ 1 ♀ 1 imm. (AMNH); Chepu, E. Maury coll., 29.11.1981, 3 ♂ 1 ♀ 3 imm. (MACN). Llanquihue: Salto Petrohue, S.Peck, J.Peck coll., 23.12.1984, 1 imm. (AMNH).

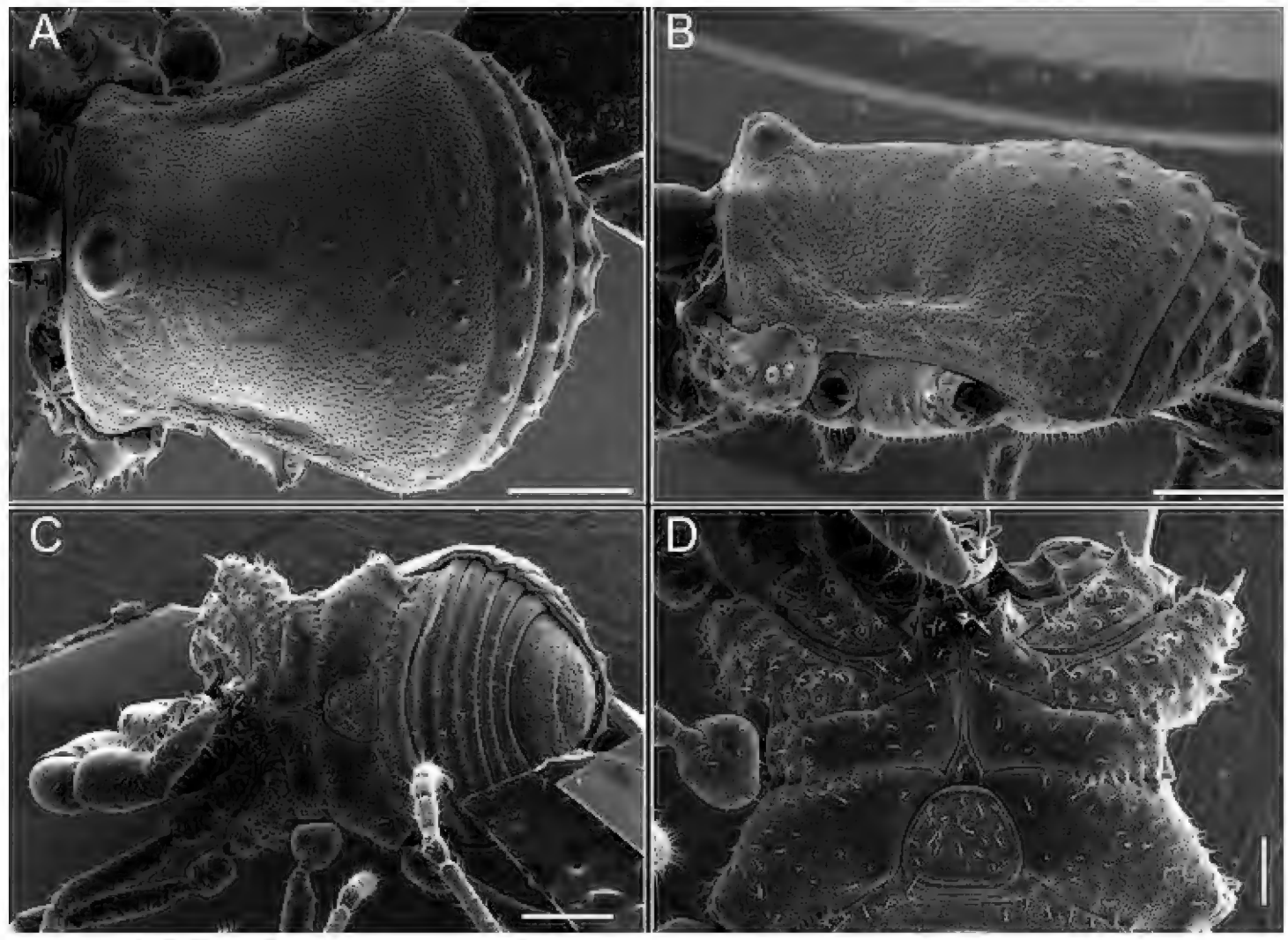

Figure 69. *Nerudiella americana* comb. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

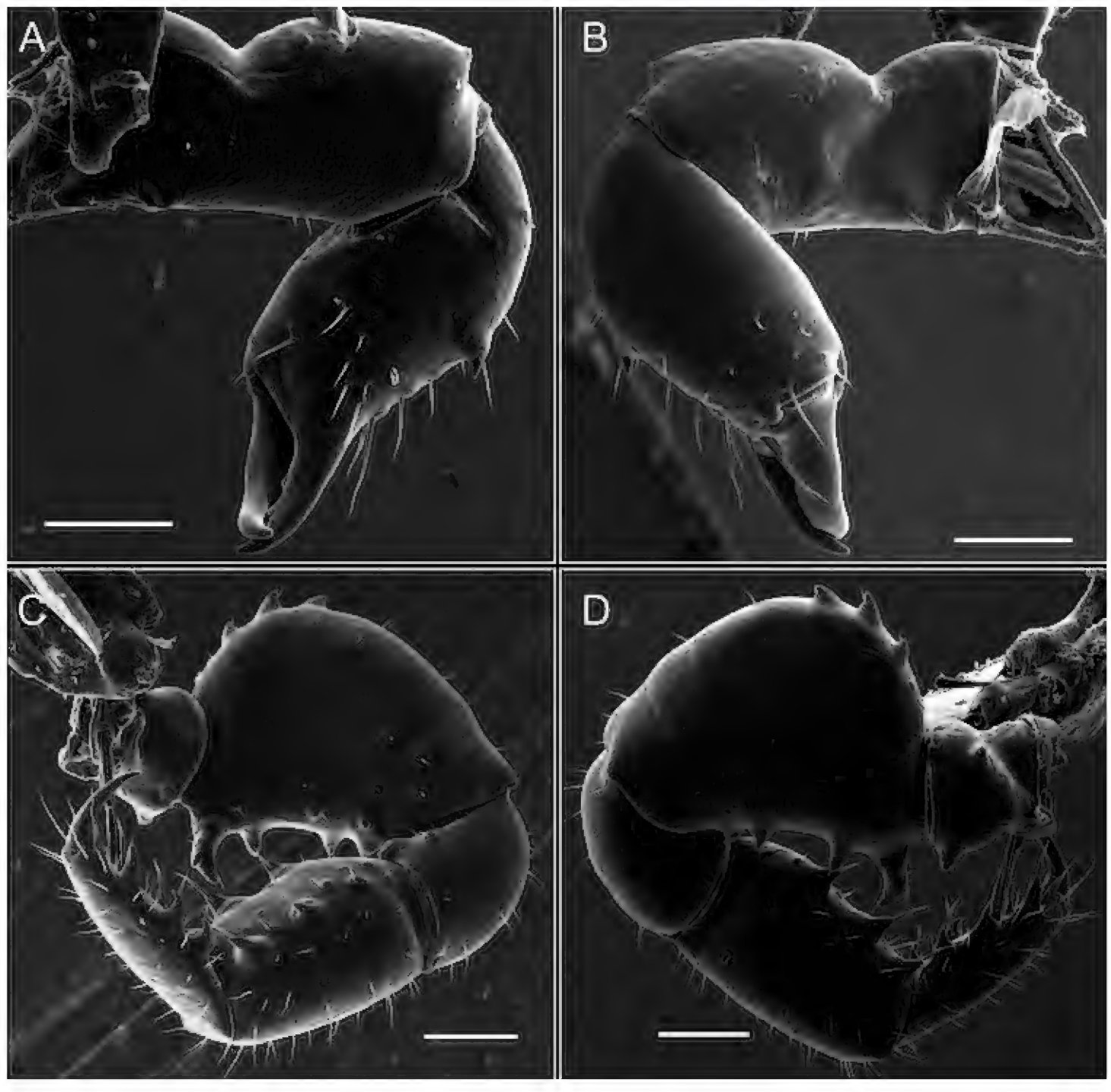

Figure 70. *Nerudiella americana* comb. nov. chelicerae: mesal **A** ectal **B** Pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

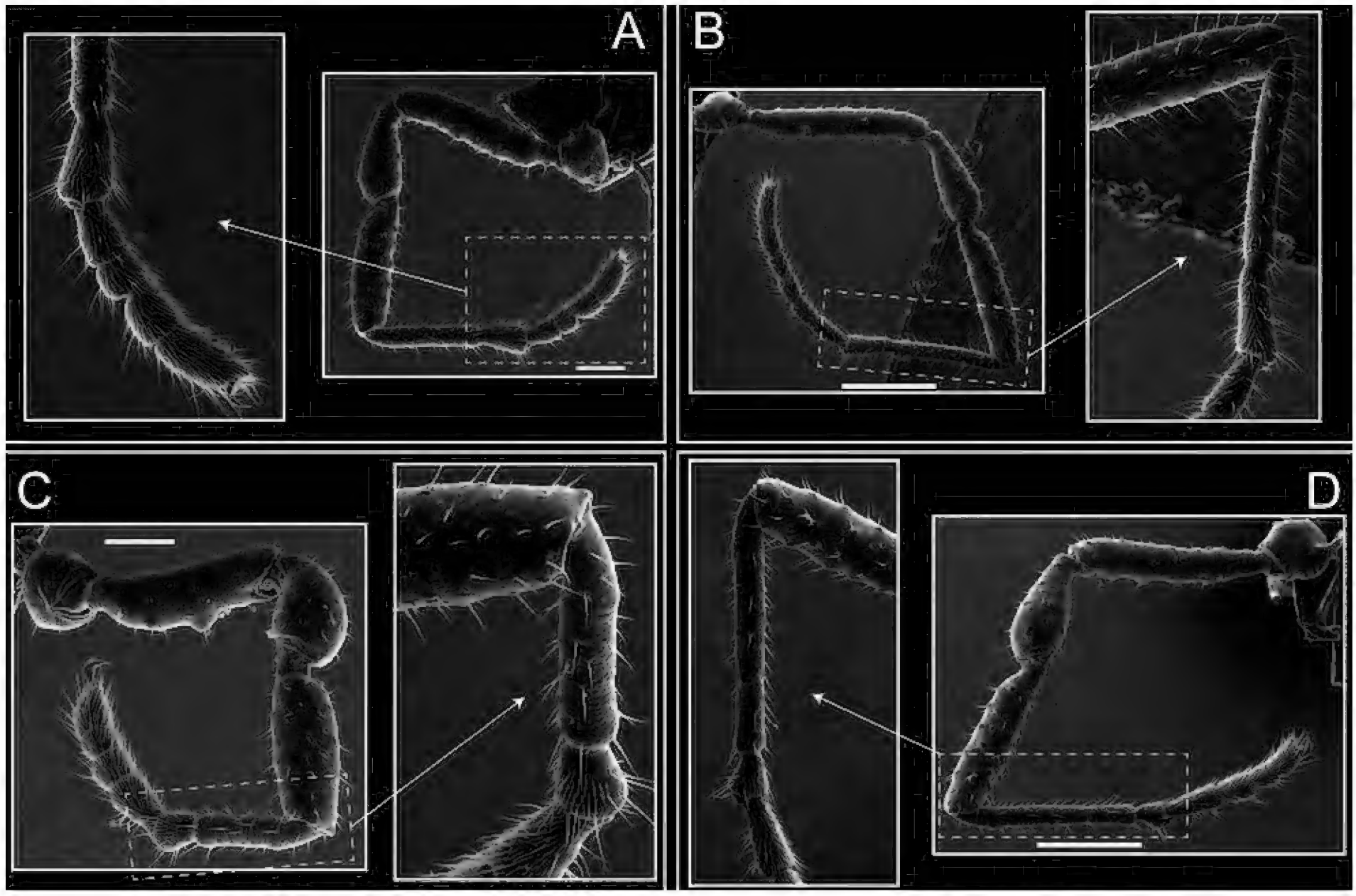

Figure 71. *Nerudiella americana* comb. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

Diagnosis. This species stands out from the others in the genus due to its sturdy capsula externa and distinctive "T"-shaped dorsal fold. The capsula externa apex is extremely delicate. It can also be differentiated from almost all species of the genus using somatic characters (except from *N. cautin* sp. nov. and *N. jaimei* sp. nov.) by having the dorsal scutum with a low, broad-based tubercles.

Distribution. Chile: Los Lagos Region (Fig. 4F).

Redescription of male paratype SMF RII/13414. Measurements: Total length 2.73, dorsal scutum length 2.21, carapace max. width 1.47, mesotergum max. width 1.95. Appendage measurements: Pedipalps. Trochanter length 0.28, femora length 0.97, patella length 0.61, tibia length 0.74, tarsus length 0.71. Leg I: trochanter (tr) 0.26, femora (fe) 0.92, patella (pa) 0.54, tibia (ti) 0.69, metatarsus (mt) 0.82, tarsus (ta) 0.70. II: tr 0.32, fe 1.16, pa 0.57, ti 0.93, mt 1.07, ta 1.14. III: tr 0.30, fe 0.71, pa 0.43, ti 0.65, mt 0.59, ta 0.72.IV: tr 0.39, fe 1.08, pa 0.70, ti NA, mt NA, ta NA.

Dorsum (Fig. 68, 69). Eta (η) dorsal scutum in the shape of an hourglass. Ocularium slightly elevated. Dorsal scutum microgranulate with a group of low setiferous granules. Areas on scutum not clearly delimited. Along the back margin, with a row of low and broad setiferous granules. Free tergites with a row of low and broad setiferous granules.

Chelicerae (Fig. 70A, B). Segment I smooth in texture without prominent tubercles. Segment II with a small frontal tubercle and covered with scattered setae, giving it a textured appearance.

Pedipalps (Fig. 70C, D). Coxa I with a smooth surface without any notable tubercles. Trochanter with small tubercles on both the dorsal and ventral sides.

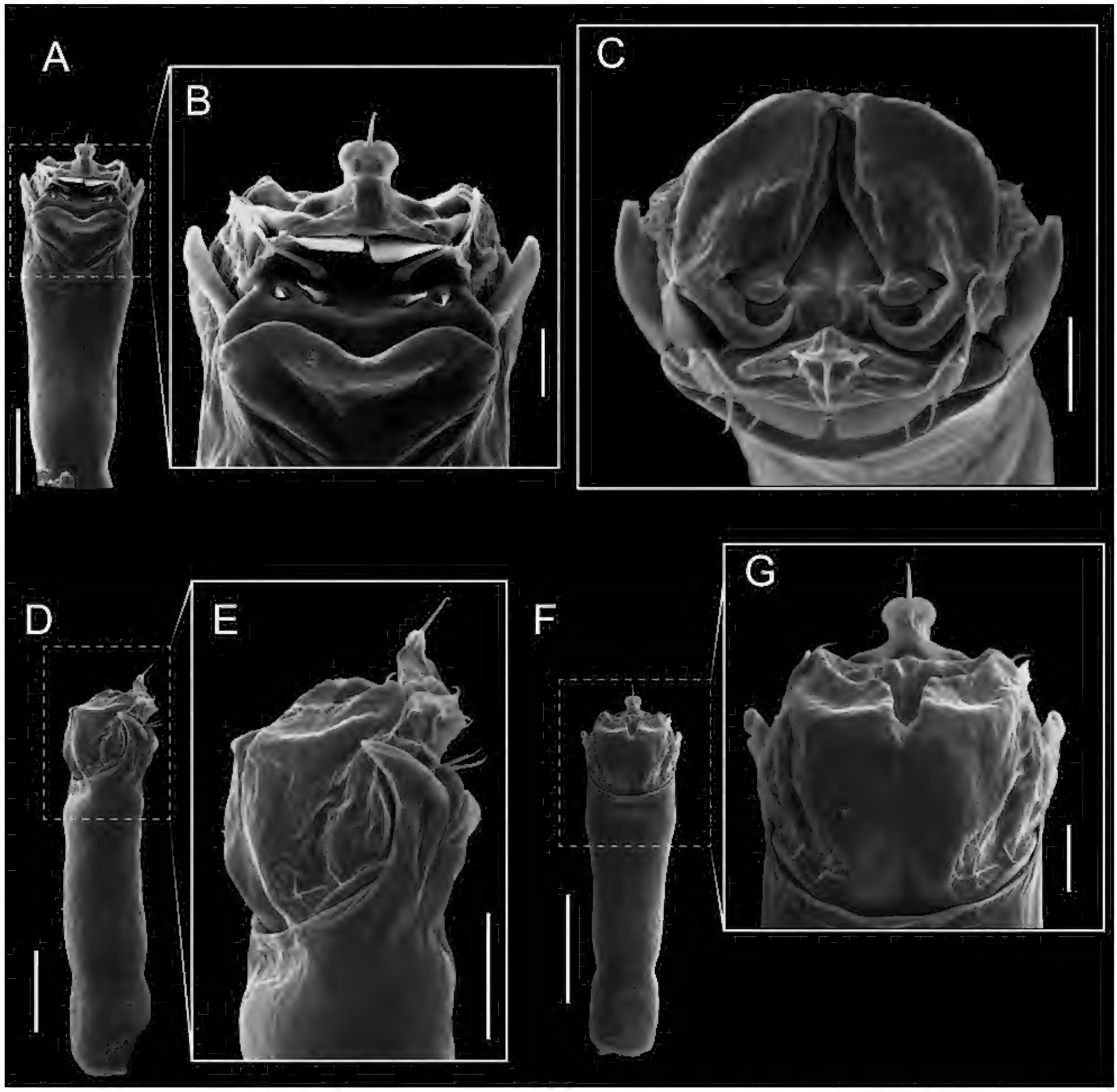

Figure 72. *Nerudiella americana* comb. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 50 μm (**B, C, G**); 100 μm (**E**).

In dorsal view, femora with three spines with subdistal setae. In ventral view, with one long bifurcated spine and two spines with subdistal setae. In mesal view, with six low setiferous tubercles on the femora. Patella with a mesal row of setiferous tubercles. Tibia with three ectal and two mesal spines with subdistal setae, and six low setiferous tubercles. Tarsus with three mesal and ectal spines with setae, with a few setae.

Legs (Fig. 71). Leg I with sparse setiferous tubercles. Leg II features two rows of setiferous tubercles, while legs III and IV exhibit only microgranulation without distinct tubercles. With three bridges connecting legs II and III, six bridges between legs III and IV, and four bridges connecting leg IV to the opisthosoma. Distal bridge longer than the others. Bridges do not obstruct the spiracles, although they appear partially covered with a subdistal tubercle. A

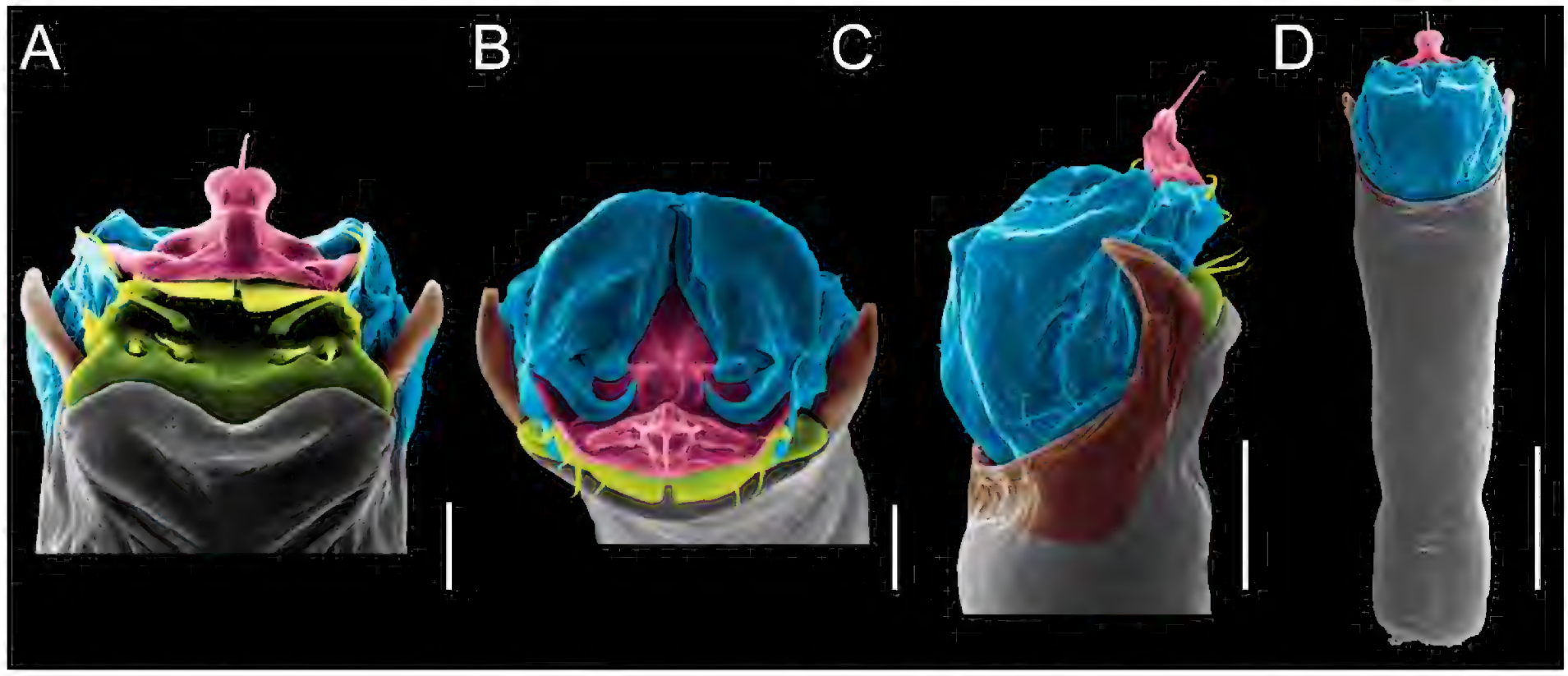

Figure 73. *Nerudiella americana* comb. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm (**A, B, D**); 100 μm (**C**).

smooth surface occupies ~ ¼ of leg II, ¾ of leg III, and ⅓ of leg IV. Sternum arrow-shaped. Femora III with a remarkable triangular tubercle. Leg IV with a row of four subtriangular tubercles. Legs I–IV covered in setae, with tarsal area and calcaneus densely setose. Calcaneus smaller than astragalus, ~ 3× smaller in legs I–III, 4× smaller in leg IV. Tarsal count: 4–6–4–4.

Penis (Figs 72, 73). Pars distalis with a prominent ventral plate divided into two lamellae by a cleft. Each lamella equipped with three pointed macrosetae on the ventral surface and one on the dorsal surface. Dorsal and lateral surfaces covered by a capsula externa, with a cleft that separates the capsula externa into two halves. With an additional dorsolateral plate attached to the pars basalis. Capsula interna longer than capsula externa and partially covers ventral plate.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 2.88, carapace length 1.17, dorsal scutum length 2.21, carapace max. width 1.47, mesotergum max. width 2.07. Appendage Measurements: Pedipalps. Trochanter length 0.23, femora length 0.74, patella length 0.46, tibia length 0.58, tarsus length 0.62. Leg I: trochanter (tr) 0.21, femora (fe) 0.88, patella (pa) 0.50, tibia (ti) 0.65, metatarsus (mt) 0.79, tarsus (ta) 0.65. II: tr 0.32, fe 1.12, pa 0.56, ti 0.90, mt 0.98, ta 1.18. III: tr 0.32, fe 0.81, pa 0.46, ti 0.59, mt 0.67, ta 0.64. IV: tr 0.35, fe 1.16, pa 0.70, ti 0.89, mt 1.21, ta 0.87. Tarsal count: 3–6–4–4.

***Nerudiella cachai* sp. nov.**

https://zoobank.org/27F81489-12E3-4DC3-858D-5DF1C0ECB048

Figs 74–79

Material examined. ***Holotype*.** ♂ **Chile.** Concepción: Estero Nonguén, 36.82106°S, 73.01649°W, T. Cekalovic coll., 21.IV.1976 (MNHNCL). ***Paratypes*.** **Chile.** Concepción: Estero Nonguén, T.Cekalovic coll., 13.III.1977, 7 ♂ 2 ♀ (MACN). Same locality, T.Cekalovic coll., 16.IV.1977, 1 ♀ 1 imm. (MACN). Same

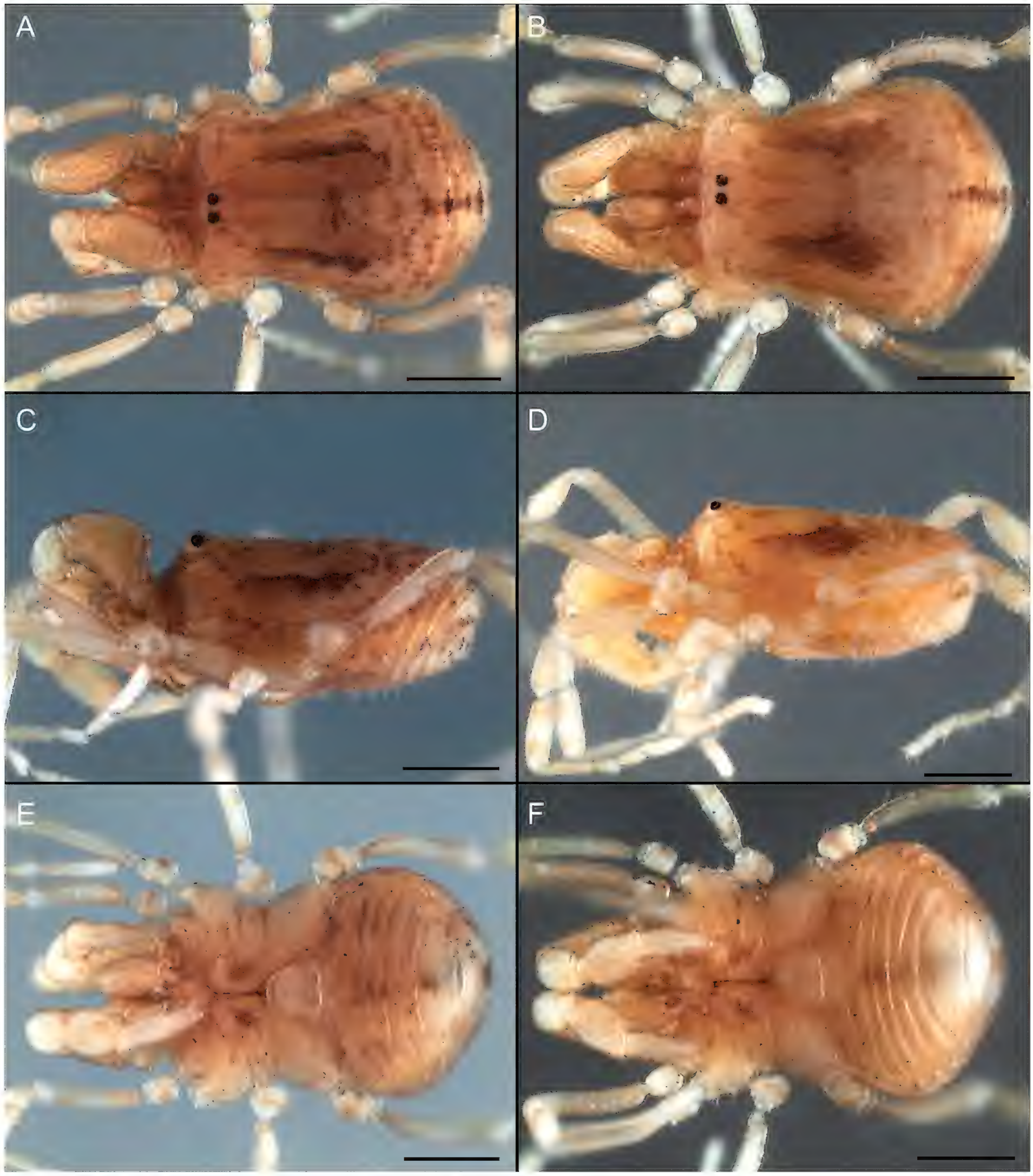

Figure 74. *Nerudiella cachai* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 500 µm. Species of Clade C, see Fig. 3

locality, 1250 m, N. Platnick, R.Schuh coll., 19.11.1981, 2 ♂ 1 imm. (AMNH). Agua de la Gloria, T.Cekalovic coll., 14.VIII.1978, 1 ♂ (MACN).

Additional material. CHILE. Arauco. Caramávida, San Alfonso, Quebrada Caramávida, San Alfonso, Arauco reserve, 37.70942°S, 73.17107°W, 750 m, A. Ojanguren, P. Goloboff, M. Ramírez, G. Azevedo, W. Porto coll., 15.I.2018, 30 imm. (MACN). 16 km N Tres Pinos, 37.54143°S, 73.41555°W, A. Newton, M. Thayer coll., 12.XII.1982, 2 ♂ (AMNH). Concepción. Penco, 36.734°S, 72.98006°W, T.Ce-

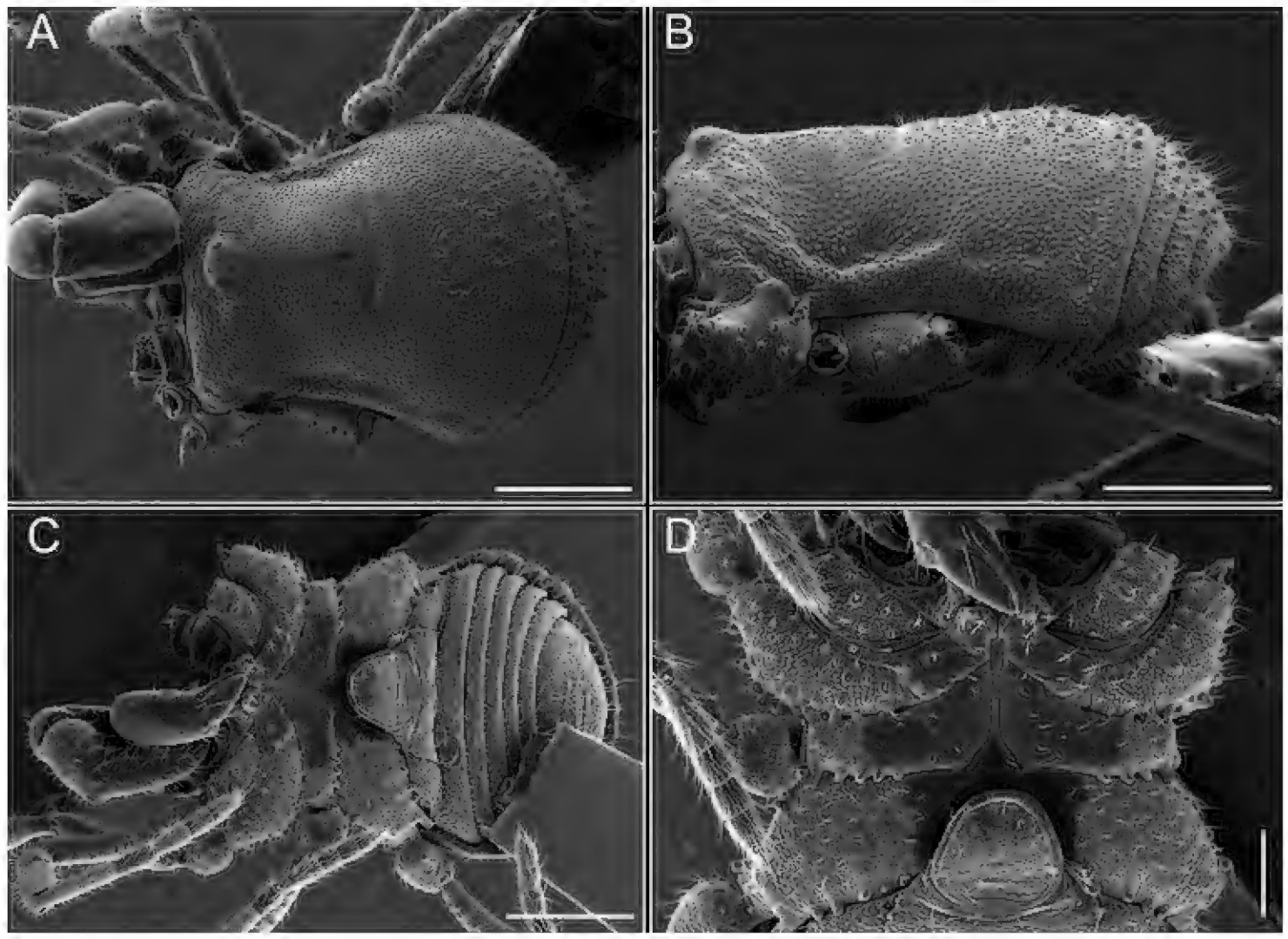

Figure 75. *Nerudiella cachai* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

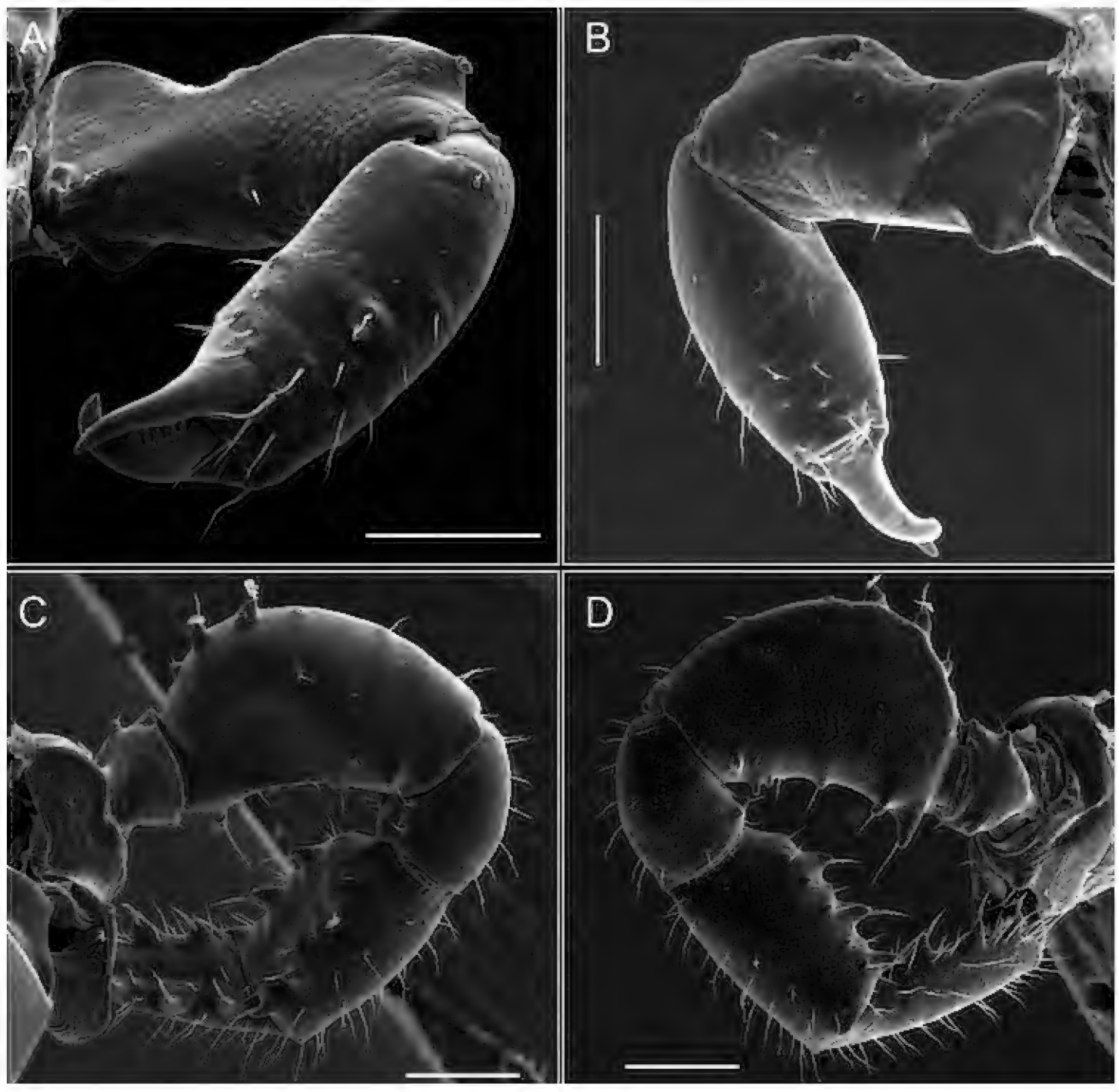

Figure 76. *Nerudiella cachai* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

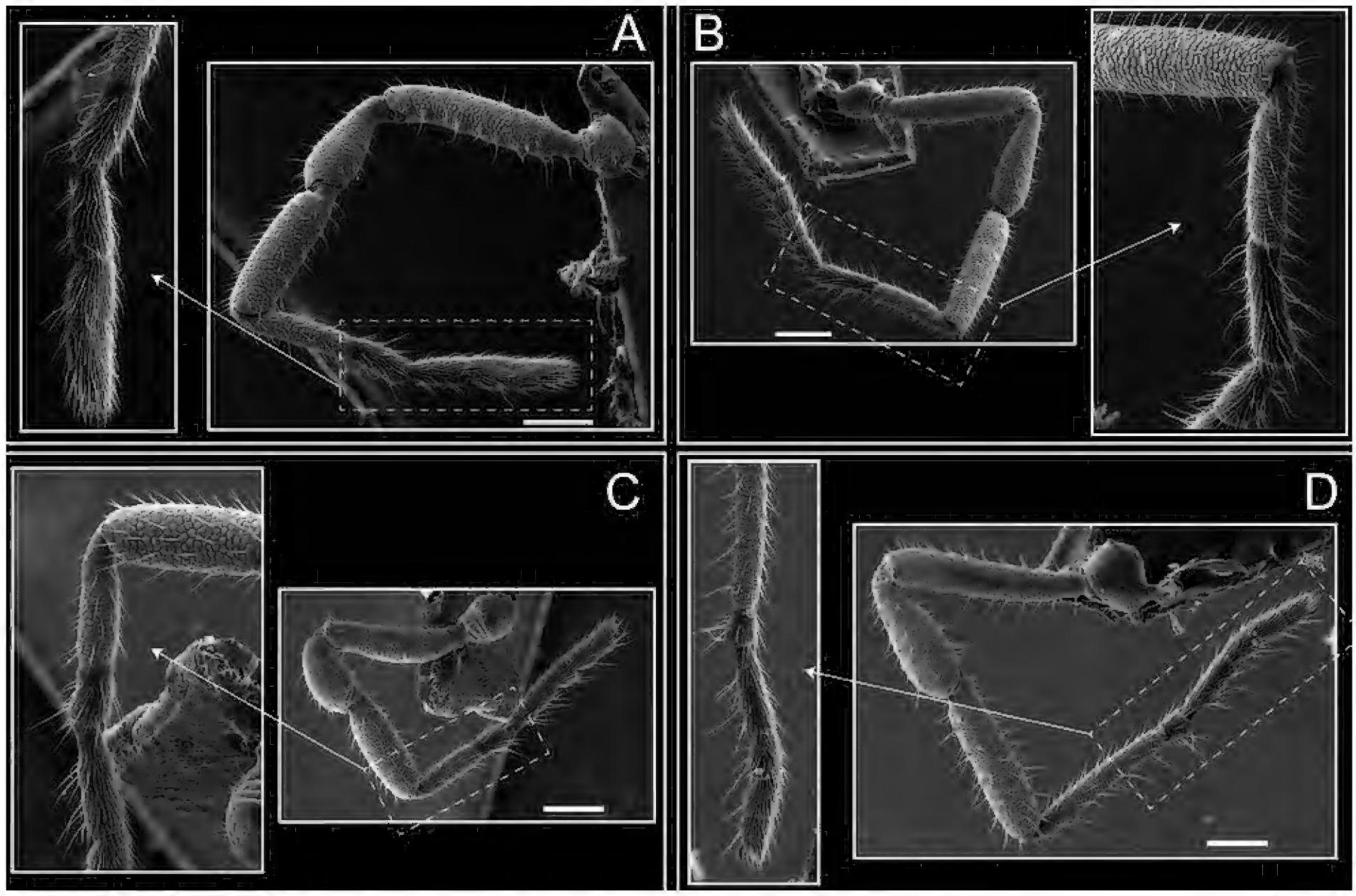

Figure 77. *Nerudiella cachai* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm.

kalovic coll., 23.IV.1977, 5 ♂ 5 ♀ 2 imm. (MACN). Cerro Caracol, 36.83465°S, 73.0488°W, T.Cekalovic coll., 10.IV.1977, 6 ♂ 1 ♀ (MACN). Estero Nonguén, 36.82096°S, 73.0164°W, T.Cekalovic coll., 03.XII.1982, 11 imm. (MACN). Esquadrón, 36.9824°S, 73.14165°W, T.Cekalovic coll., 10.08.1978, 1 imm. (MACN). Estero Nonguén, 36.82096°S, 73.0164°W, T.Cekalovic coll., 19.VIII.1978, 2 imm. (MACN). El Manzano, Camino de Santa Juana, 36.86677°S, 72.78498°W, T.Cekalovic coll., 13.I.1985, 1 ♂ (MACN). Colcura, 37.11386°S, 73.14724°W, T.Cekalovic coll., 30.I.1985, 1 imm. (MACN). Hualpén, Terrestrial Biology Station Univ. de Concepción, 36.79821°S, 73.16307°W, 52 m, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 14.I.2018, 1 ♀ 3 mm (MACN). Estero Nonguén, 36.82129°S, 73.0164°W, N. Platnick, R.Schuh coll., 16.XI.1981, 6 ♂ 2 ♀ 6 imm. (AMNH). 8.4 km W La Florida, 36.84976°S, 72.78826°W, 170 m, A. Newton, M. Thayer coll., 02.I.1983, 3 ♀ (AMNH). Dichoco. Estero Bellavista, 36.71992°S, 72.91118°W, T.Cekalovic coll., 04.I.1984, 2 ♂ 4 ♀ 4 imm. (MACN). 6 km S San Pedro, 36.90616°S, 73.10894°W, N. Platnick, O. Francke coll., 22.I.1985, 2 ♂ 2 imm. (AMNH). Dichoco. Estero Bellavista, 36.71992°S, 72.91118°W, T.Cekalovic coll., 04.I.1984, 1 ♀ 1 imm. (MACN). Parque Nacional Nahuelbuta, T.Cekalovic coll., 19.XI.1981, 2 ♂ 1 ♀ (MACN). Estero Nonguén, 36.82096°S, 73.0164°W, T.Cekalovic coll., 03.XI.1982, 1 ♂ 4 imm. (MACN).

Etymology. The specific epithet cachai refers to a popular expression in Chile that is roughly translated to “you know what I mean?” “am I right?”, or “get it?”. It is derived from the English term “to catch,” which refers to catching but is also used to mean “understanding or understanding something.” Noun in apposition.

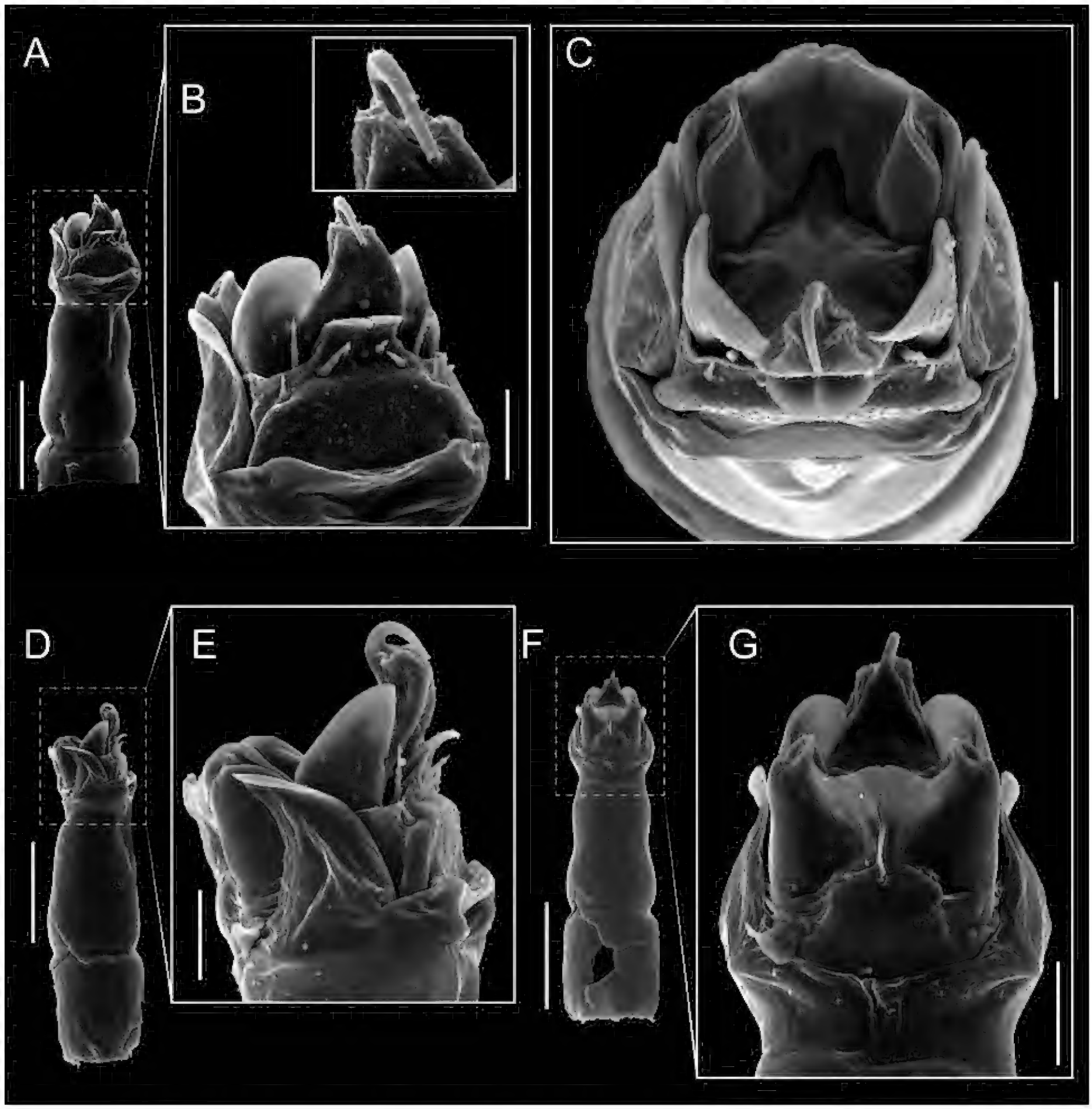

Figure 78. *Nerudiella cachai* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 50 μm (**B, C, E, G**).

Diagnosis. This species can be easily distinguished from other species of the genus by its male genitalia, which exhibits a highly reduced ventral plate, with a stylus that is formed by a thin and slender tube.

Distribution. Chile: Bío-Bío Region.

Description of male holotype. Measurements: Total length 2.26, carapace length 0.92, dorsal scutum length 1.84, carapace max. width 1.23, mesotergum max. width 1.70. Appendage measurements: Pedipalps. Trochanter length 0.23, femora length 0.91, patella length 0.44, tibia length 0.68, tarsus length 0.59. Leg I: trochanter (tr) 0.22, femora (fe) 1.10, patella (pa) 0.51, tibia (ti) 0.79, metatarsus (mt) 0.92, tarsus (ta) 0.92. II: tr 0.27, fe 1.33, pa 0.57, ti 1.00, mt 1.22, ta 1.45. III: tr 0.21, fe 0.91, pa 0.31, ti 0.73, mt 0.75, ta 0.74. IV: tr 0.32, fe 1.29, pa 0.59, ti 1.04, mt 1.30, ta 0.86.

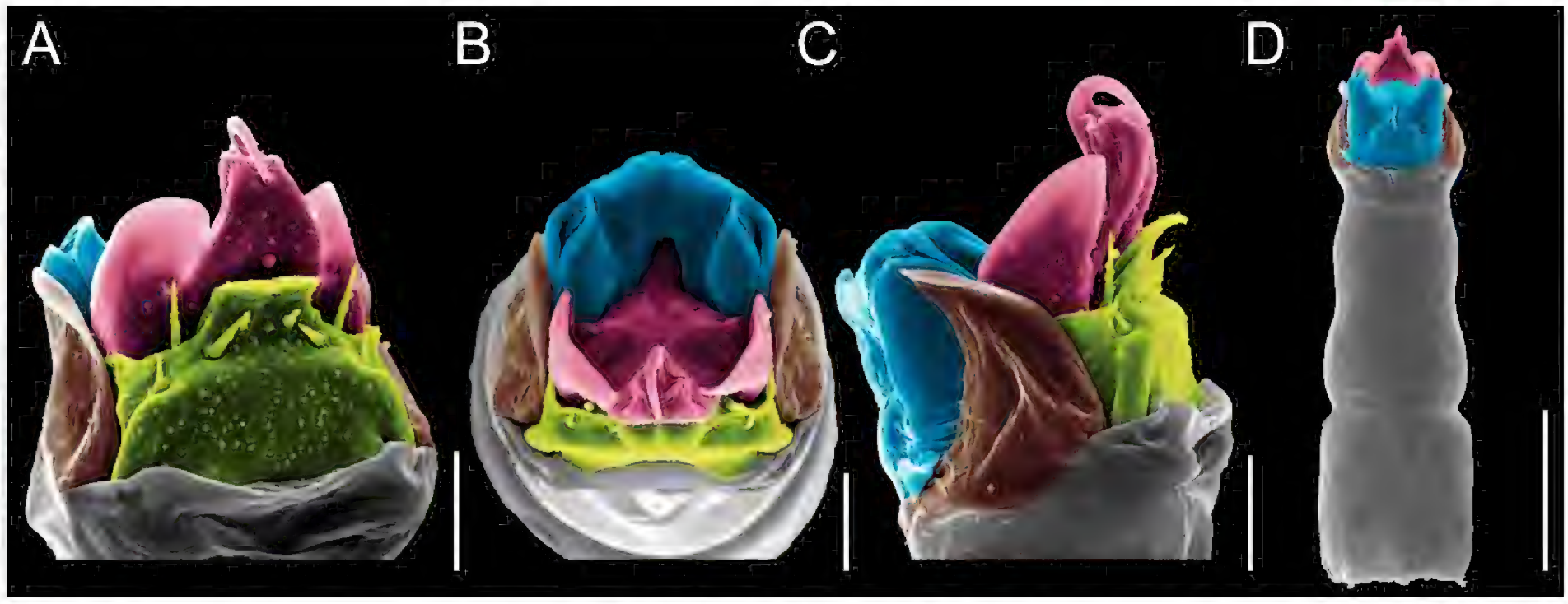

Figure 79. *Nerudiella cachai* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm.

Dorsum (Fig. 74, 75). Eta (η) dorsal scutum in the shape of an hourglass. Ocularium low. Dorsal scutum microgranulate, with no clear delimitation of distinct areas. Areas III and IV with irregular rows of small rounded setiferous tubercles; posterior margin with a similar irregular row of small rounded setiferous tubercles. All free tergites covered in small setae and with a row of small rounded setiferous tubercles.

Chelicerae (Fig. 76A, B). Segment I with a small tubercle on its dorso-distal surface. Segment II with a small frontal tubercle and scattered setae.

Pedipalps (Fig. 76C, D). Trochanter characterized by the presence of two small dorsal tubercles and one ventral tubercle. In dorsal view, femora with three spines with subdistal setae; in ventral view, with five tubercles with subdistal setae, with four mesal setiferous tubercles and one ectal setiferous tubercle positioned beneath. Patella with both mesal and ectal setiferous tubercles. Tibia with three ectal and two mesal spines with subdistal setae. Tarsus with three mesal and ectal spines, accompanied by scattered setae.

Legs (Fig. 77). Segments I and II with two rows of setiferous tubercles; segments III and IV microgranulate but without setiferous tubercles. With three bridges connecting legs II and III, six bridges between III and IV, and four bridges between leg IV and the opisthosoma. Distal bridge longer than the others. The bridges do not obstruct the spiracles. The smooth area occupies ~ ¼ of leg II, ¾ of leg III, and < ⅓ of leg IV. Sternum arrow-shaped, with a triangular-shaped posterior margin. Legs I–IV covered with setae, the area of the tarsus and calcaneus are densely setose. Femora I–IV with a ventral row of setiferous granules. Calcaneus smaller than astragalus, ≥ 3× smaller (legs I, III) of the same size (II) and 4× smaller (leg IV). Tarsal count: 3–6–4–4.

Penis (Figs 78, 79). Pars distalis with a small ventral plate divided into two distinct small lamellae by a central cleft. Each lamella adorned with three pointed macrosetae on its ventral surface, with a single macroseta on its dorsal surface. Additionally, there is a capsula externa, characterized by its square shape, which covers the dorsal and lateral surfaces. Attached to the pars basalis is a dorsolateral plate. The capsula interna, longer in length compared to the

capsula externa, partially overlays the ventral plate. Apex of the capsula interna with a tubular stylus.

Female. Pedipalp femora noticeably smaller than those of males.

Female measurements. Total length 2.30, carapace length 0.87, dorsal scutum length 1.85, carapace max. width 1.24, mesotergum max. width 1.75. Appendage Measurements: Pedipalps. Trochanter length 0.17, femora length 0.72, patella length 0.35, tibia length 0.54, tarsus length 0.57. Leg I: trochanter (tr) 0.22, femora (fe) 0.73, patella (pa) 0.43, tibia (ti) 0.53, metatarsus (mt) 0.65, tarsus (ta) 0.60. II: tr 0.28, fe 0.97, pa 0.49, ti 0.75, mt 0.82, ta 1.02. III: tr 0.22, fe 0.61, pa 0.38, ti 0.53, mt 0.57, ta 0.56. IV: tr 0.34, fe 0.90, pa 0.55, ti 0.76, mt 0.91, ta 0.75.

Nerudiella caramavida sp. nov.

https://zoobank.org/45A9D45E-90CE-43D9-9223-BD691DA31146

Figs 80–85

Material examined. ***Holotype*.** ♂ **Chile.** Malleco: P.N. Nahuelbuta, M. Ramírez, F. Labarque, 12.II.2005 (MNHNCL). ***Paratypes*. Chile.** Malleco: P.N. Nahuelbuta, M. Ramírez, F. Labarque, 12.II.2005, 9 ♂ 7 ♀ 3 imm. (MACN), Malleco: P.N. Nahuelbuta, 1250 m, N. Platnick, R.Schuh. 19.XI.1981, 1 ♂ 2 ♀ 6 imm. (AMNH). Ñuble: 2 km E de Las Trancas, E. Maury. 09.I.1989, 1 ♂ 1 ♀ (MACN).

Additional material. Chile. Arauco. Hualpén, Univ. Concepción Terrestrial Biology Station, 36.79821°S, 73.16307°W, 52 m, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 14.I.2018, 1 ♂ (MACN). Caramávida, San Alfonso, Quebrada Caramávida, Arauco Reserve, 37.70942°S, 73.17107°W, 750 m, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 3 mm. 14.I.2018, 1 ♀, 1 ♂ 3.

Etymology. The specific epithet "*caramavida*" is derived from the type locality of the species, Quebrada Caramávida, located on the western slope of the Cordillera de Nahuelbuta in the Bío-Bío Region. The choice of this name, a noun in apposition, is based on the geographic location where the species was originally discovered.

Diagnosis. This species can be easily distinguished from its congeners by the capsula interna of the male genitalia, which has two long lateral processes.

Distribution. Chile: Bío-Bío Region (Fig. 4F).

Description of male holotype. Measurements: Total length 2.74, carapace length 1.1, dorsal scutum length 2.05, carapace max. width 1.37, mesotergum max. width 1.96. Appendage measurements: Pedipalps. Trochanter length 0.20, femora length 0.92, patella length 0.40, tibia length 0.62, tarsus length 0.83. Leg I: trochanter (tr) 0.20, femora (fe) 0.85, patella (pa) 0.46, tibia (ti) 0.62, metatarsus (mt) 0.78, tarsus (ta) 0.65. II: tr 0.25, fe 1.84, pa 0.57, ti 0.90, mt 1.31, ta 1.29. III: tr 0.31, fe 0.79, pa 0.38, ti 0.64, mt 0.66, ta 0.60. IV: tr 0.31, fe 1.08, pa 0.63, ti 0.88, mt 1.04, ta 0.82.

Dorsum (Fig. 80, 81). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded, pointing a bit forward. Dorsal scutum microgranulate. Mesotergal areas of dorsal scutum not well delimited; with small setiferous tubercles. Free tergites with two rows of small setiferous tubercles.

Chelicerae (Fig. 82A, B). Segment I with an acute tubercle on the dorso-distal surface. Segment II with two mesal setiferous tubercles and 7–8 small se-

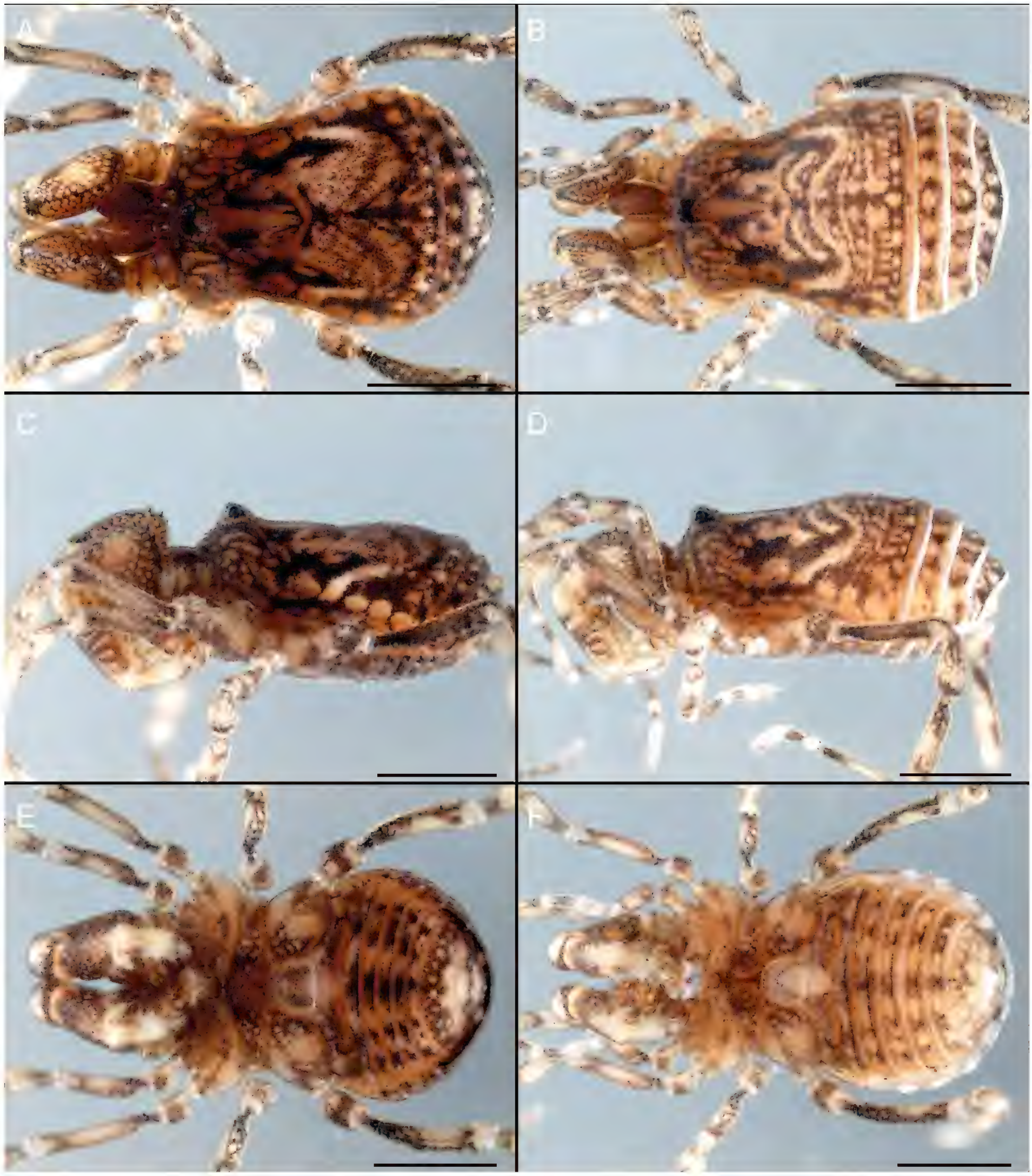

Figure 80. *Nerudiella caramavida* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

tiferous tubercles, with one triangular tubercle more prominent than others in frontal view.

Pedipalps (Fig. 82C, D). Trochanter with tiny dorsal and ventral tubercles. Femora with two robust ventral-proximal tubercles and four minor ventral-distal tubercles. Additionally, with a row of setiferous tubercles along dorsal surface of femora, with the three largest tubercles located in the proximal section. Pa-

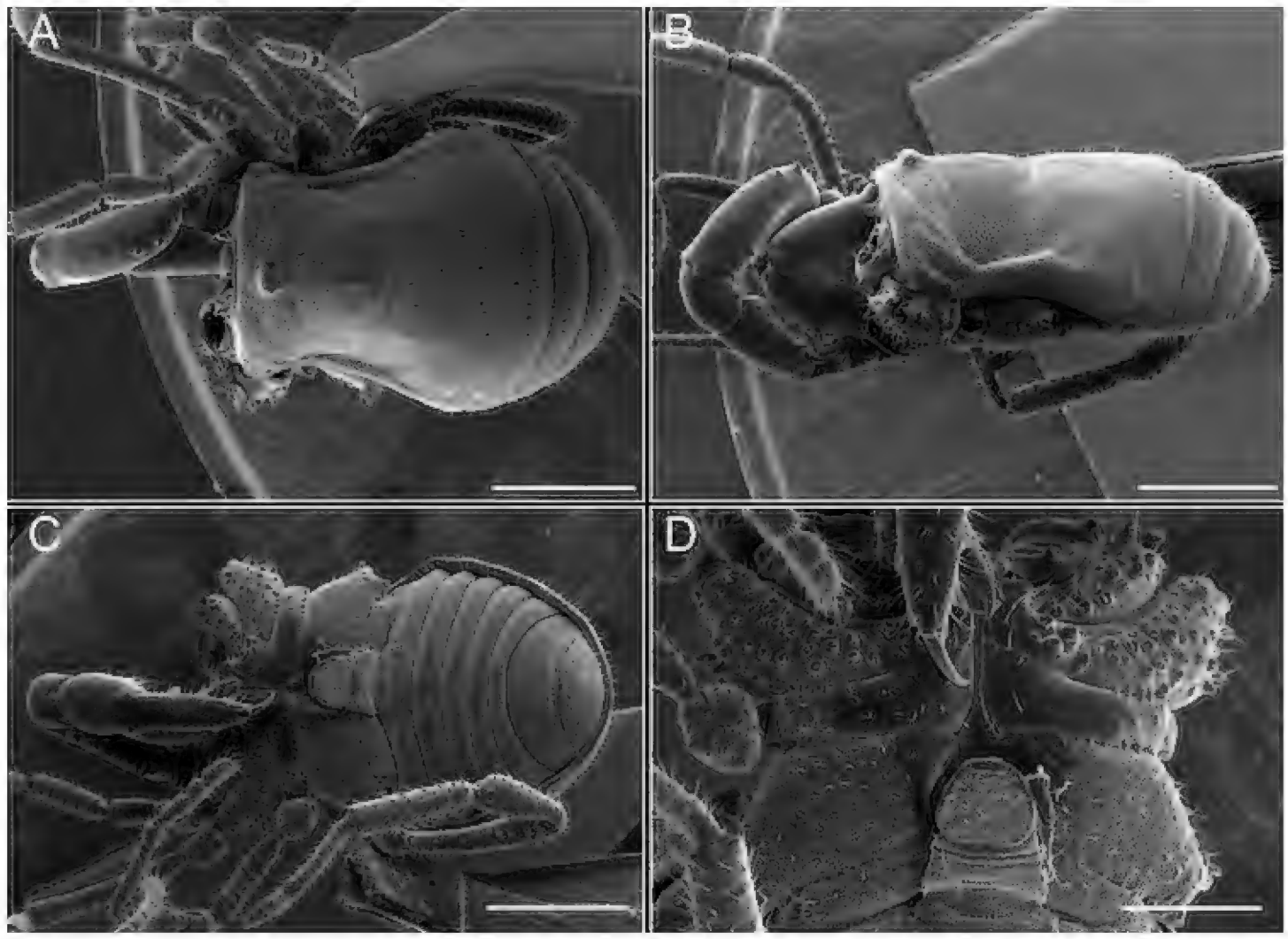

Figure 81. *Nerudiella caramavida* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 μm (**D**).

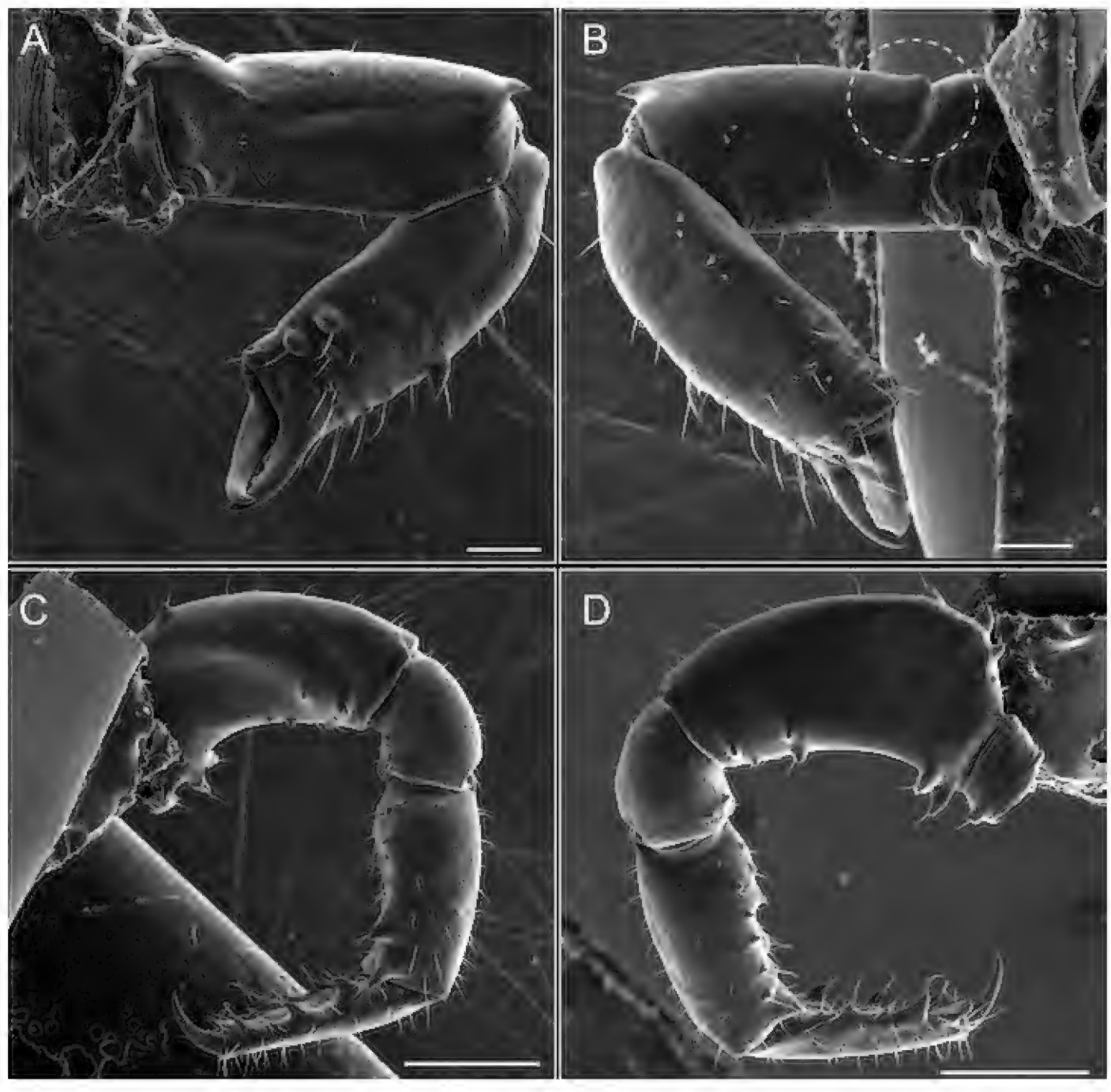

Figure 82. *Nerudiella caramavida* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

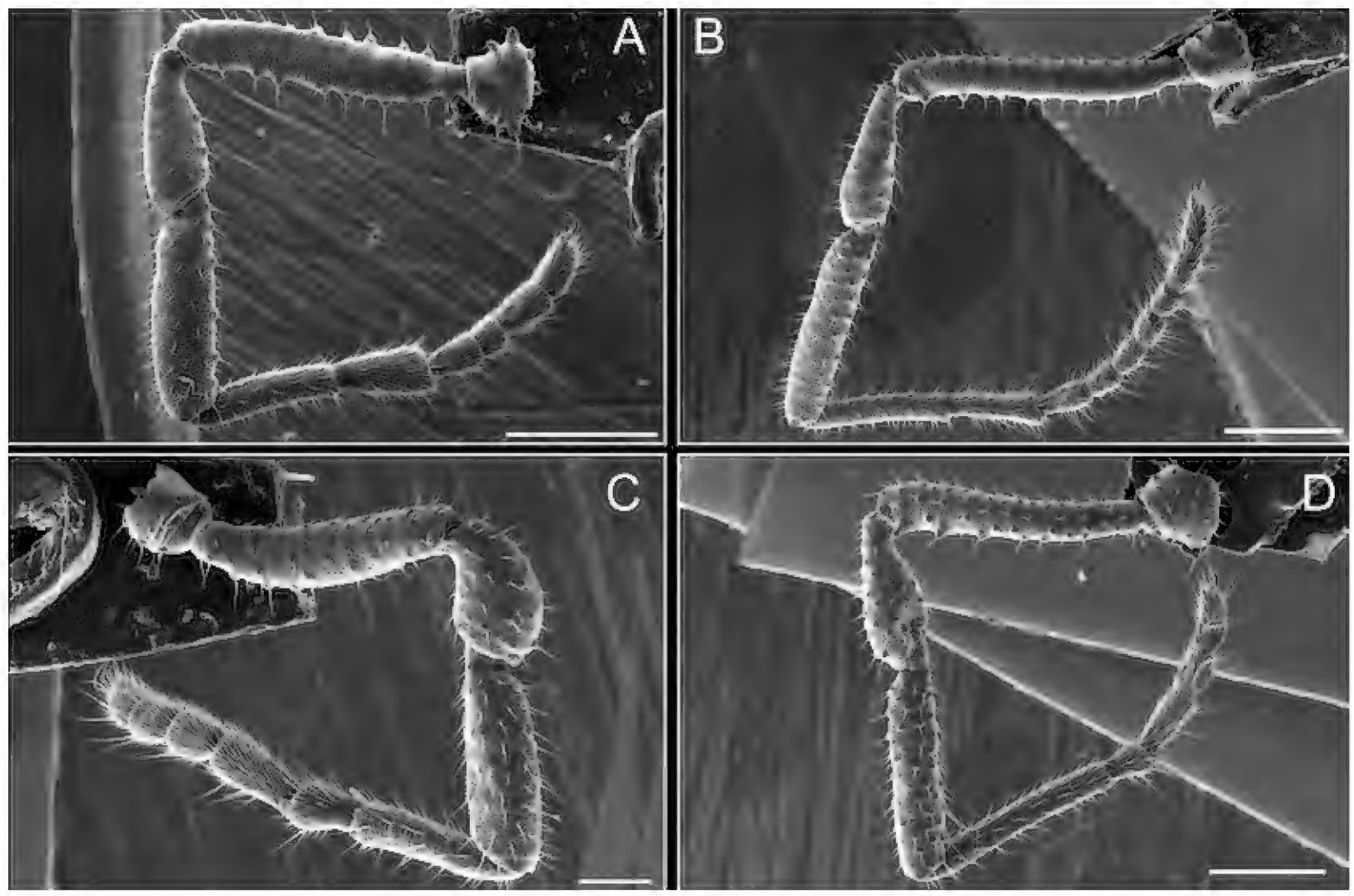

Figure 83. *Nerudiella caramavida* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 μm (**A, B, D**); 200 μm (**C**).

tella with two small ventral-ectal tubercles and two small ventral-mesal tubercles. Tibia with two rows of weaker apical tubercles and two rows of minor ventral tubercles. Tarsus characterized by three mesal and ectal spines; Also, with a few setae and subdistal setae in this region.

Legs (Fig. 83). Segment I with nine or ten setiferous tubercles; segment II with 18–20 setiferous tubercles; segment IV with five or six small tubercles connected to the opisthosoma. Spiracles not obstructed by bridges. Smooth areas with ~ 1/3 of leg II smooth, with two or three small tubercles on each side featuring subdistal setae. The smooth portion extends to ¾ of leg III and < 1/3 of leg IV. Sternum arrow-shaped. Legs smooth, with notch in tarsus I. Tarsal count: 3–6/7–4–4.

Penis (Figs 84, 85). Pars distalis with a large ventral plate bearing a cleft that divides the plate into two halves. Each half with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa covering dorsal and lateral surface, its apical region U-shaped. With a dorsolateral plate attached to the pars basalis. Capsula interna longer than the capsula externa, which has a long lateral process, perpendicular to the axis of the genitalia, with a visible stylus in its apical portion.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 2.6, carapace length 1.13, dorsal scutum length 2.1, carapace max. width 1.39, mesotergum max. width 1.98. Appendage measurements: Pedipalps. Trochanter length 0.26, femora length 0.99, patella length 0.46, tibia length 0.70, tarsus length 0.87. Leg I: trochanter (tr) 0.24, femora (fe) 1.04, patella (pa) 0.54, tibia (ti) 0.79, metatarsus (mt) 0.94, tarsus (ta) 0.78. II: tr 0.26, fe 1.51, pa 0.64, ti 1.08, mt 1.26, ta 1.44. III: tr 0.31, fe 0.93, pa 0.41, ti 0.69, mt 0.78, ta 0.78. IV: tr 0.32, fe 1.26, pa 0.61, ti 1.09, mt 1.28, ta 0.97.

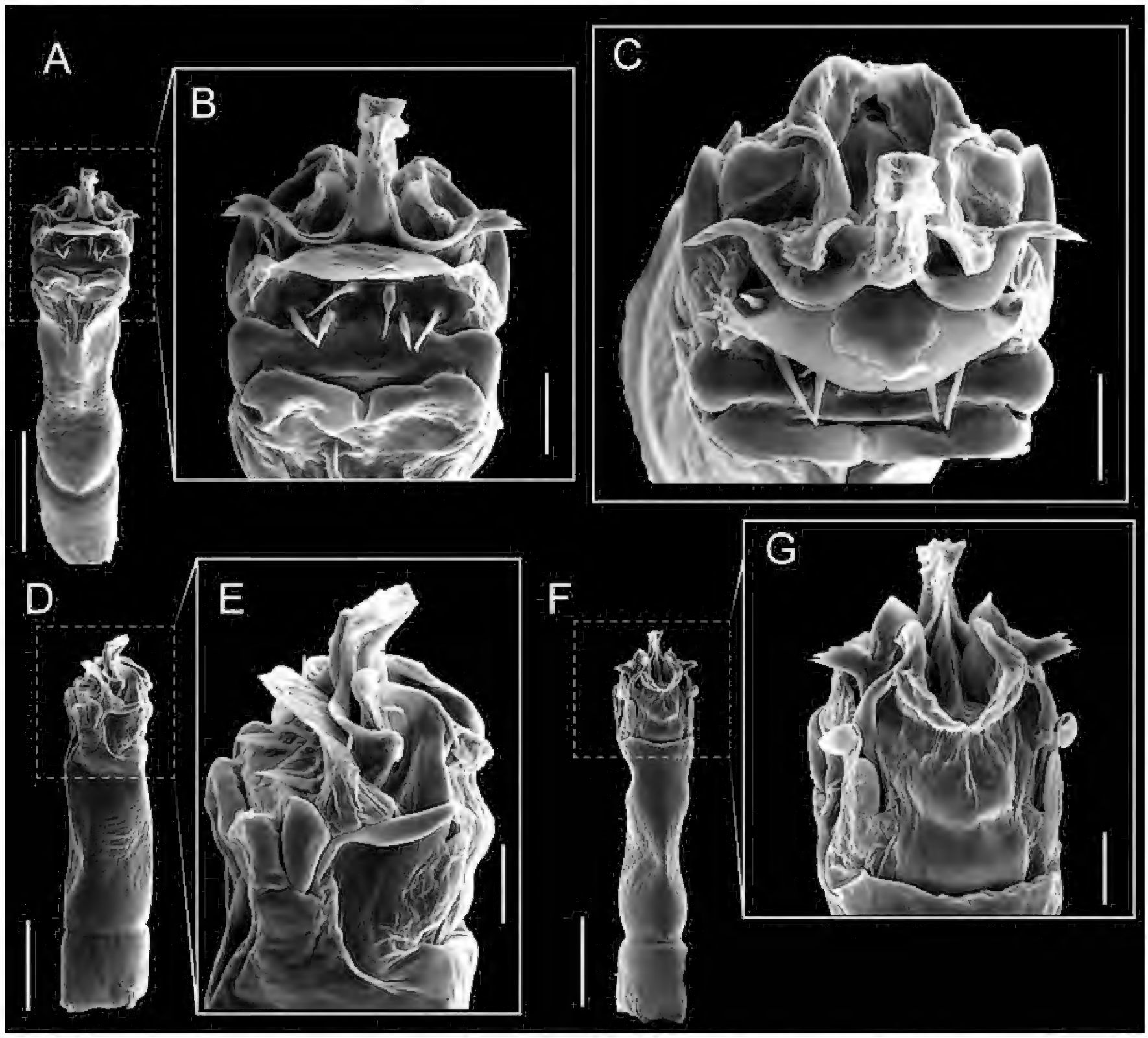

Figure 84. *Nerudiella caramavida* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, E, G**).

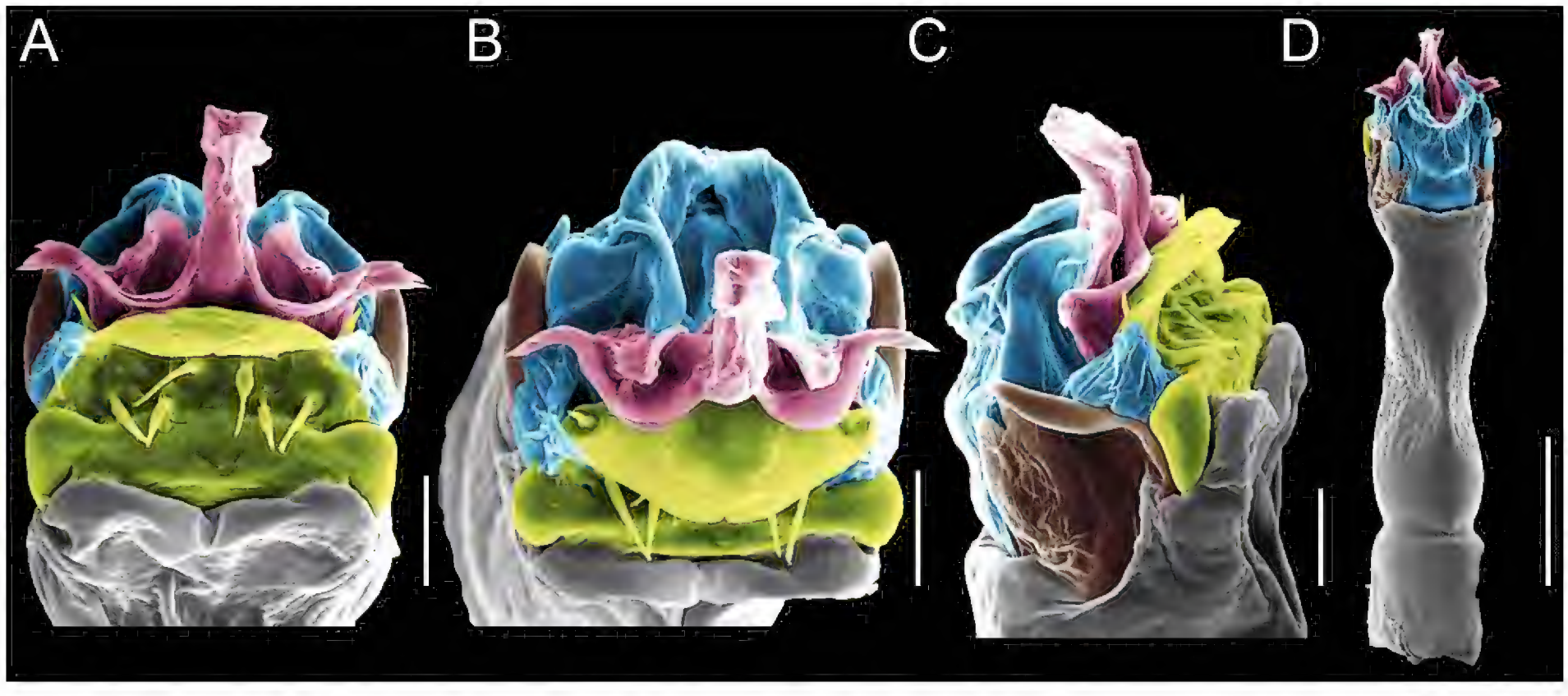

Figure 85. *Nerudiella caramavida* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 µm (**A–C**); 200 µm (**D**).

***Nerudiella cautin* sp. nov.**

https://zoobank.org/49BC3855-C82F-42EC-81D3-F4D32C7B23B4

Figs 86–91

Material examined. *Holotype*. ♂ **Chile.** Región de Los Lagos, Llanquihue, 13 km W Río Negro. Berlese. N. Platnick, R.Schuh coll., coll, 24.I.1986 (AMNH). ***Paratypes*. Chile.** Palena, Vicinity of Chaitén, 0–100 m. Berlese. N. Platnick, R.Schuh 5–7. XII.1981 2 ♂ 2 ♀ 7 imm. (AMNH). Same data, 1 ♀ 3 imm. (AMNH). Los Lagos, Palena, 25–27 km North Chaitén, 40 m. P. Goloboff, R.Schuh 17.I.1986 2 ♂ (AMNH). Coihaique, 10 km N Reserva Nacional Coyhaique. S.Peck, J.Peck. 22.I.1985 1 ♀ (FMNH). Aysén, 30 km N Puerto Cisnes. E. Maury . 09.XII.1986 (MACN).

Etymology. The specific epithet refers to the type locality of the species, the province of Cautín, located in the southern zone of Chile. Noun in apposition.

Diagnosis. The sharp tubercles on the dorsal scutum surface distinguish this species from others its congeners, particularly when observed from a dorsal view. The genitalia shows a unique U-shaped capsula externa (Fig. 91D).

Distribution. Chile: Bío-Bío, Araucanía, Los Ríos, and Los Lagos Regions (Fig. 4F).

Description of male holotype. Total length 4.17, carapace length 1.26, dorsal scutum length 2.64, carapace max. width 1.51, mesotergum max. width 2.06. Appendage measurements: Pedipalps. Trochanter length 0.35, femora length 1.05, patella length 0.58, tibia length 0.79, tarsus length 0.73. Leg I: trochanter (tr) 0.22, femora (fe) 0.83, patella (pa) 0.48, tibia (ti) 0.67, metatarsus (mt) 0.80, tarsus (ta) 0.71. II: tr 0.23, fe 1.17, pa 0.64, ti 0.89, mt 1.03, ta 1.33. III: NA. IV: tr 0.35, fe 1.15, pa 0.64, ti 0.96, mt 1.22, ta 0.98.

Dorsum (Fig. 86, 87). Dorsal scutum microgranulate, without clear delimitation of areas. Area I characterized by a row of three setae, while areas II–III display a row of six low, broad, arch-shaped setiferous tubercles. Area IV and posterior margin with a row of low, broad setiferous tubercles. Free tergites with a row of low, broad setiferous tubercles.

Chelicerae (Fig. 88A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II with a mesal tubercle and bearing few setae.

Pedipalps (Fig. 88C, D). Trochanter with a small dorsal and ectal tubercle. Femora with two ventroproximal tubercles with subdistal setae, four distal setiferous granules, and three dorsoproximal tubercles with subdistal setae. Mesal surface of the femora with two rows of setiferous granules. Patella with ventral setiferous granules. Tibia with three ectal and two mesal spines with subdistal setae, the ventral surface adorned with small setiferous granules. Tarsus with three mesal and ectal spines with subdistal setae, with a few setae and granules.

Legs (Fig. 89). Coxae I–II with setiferous tubercles, with the longest distal tubercle bearing a subdistal seta. Coxae III and IV with microgranulation only, lacking setiferous tubercles. With four bridges between legs II and III, five or six bridges between III and IV, and four bridges between leg IV and the opisthosoma, the distal bridge longer than the others. Spiracles not obstructed by bridges. The smooth surface occupies ~ ⅓ of leg II, with two small tubercles and two rounded tubercles present. In leg III, the smooth area covers ~ ¾ of the surface, while in leg IV, it occupies < ⅓ of the surface. Sternum arrow-shaped. Legs smooth, with sparse setae. Tarsal count: 4–7–4–4.

Figure 86. *Nerudiella cautin* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

Penis (Figs 90, 91). Pars distalis with large ventral plate bearing a cleft dividing the plate into two lamellae. Each lamella with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa covering dorsal and lateral surfaces, with a long cleft dividing capsula externa into two parts; with a dorsolateral plate attached to the pars basalis. Capsula interna longer than capsula externa, partially covering the ventral plate, the apical region of the capsula interna thin and sharp, the stylus not visible in its apical portion.

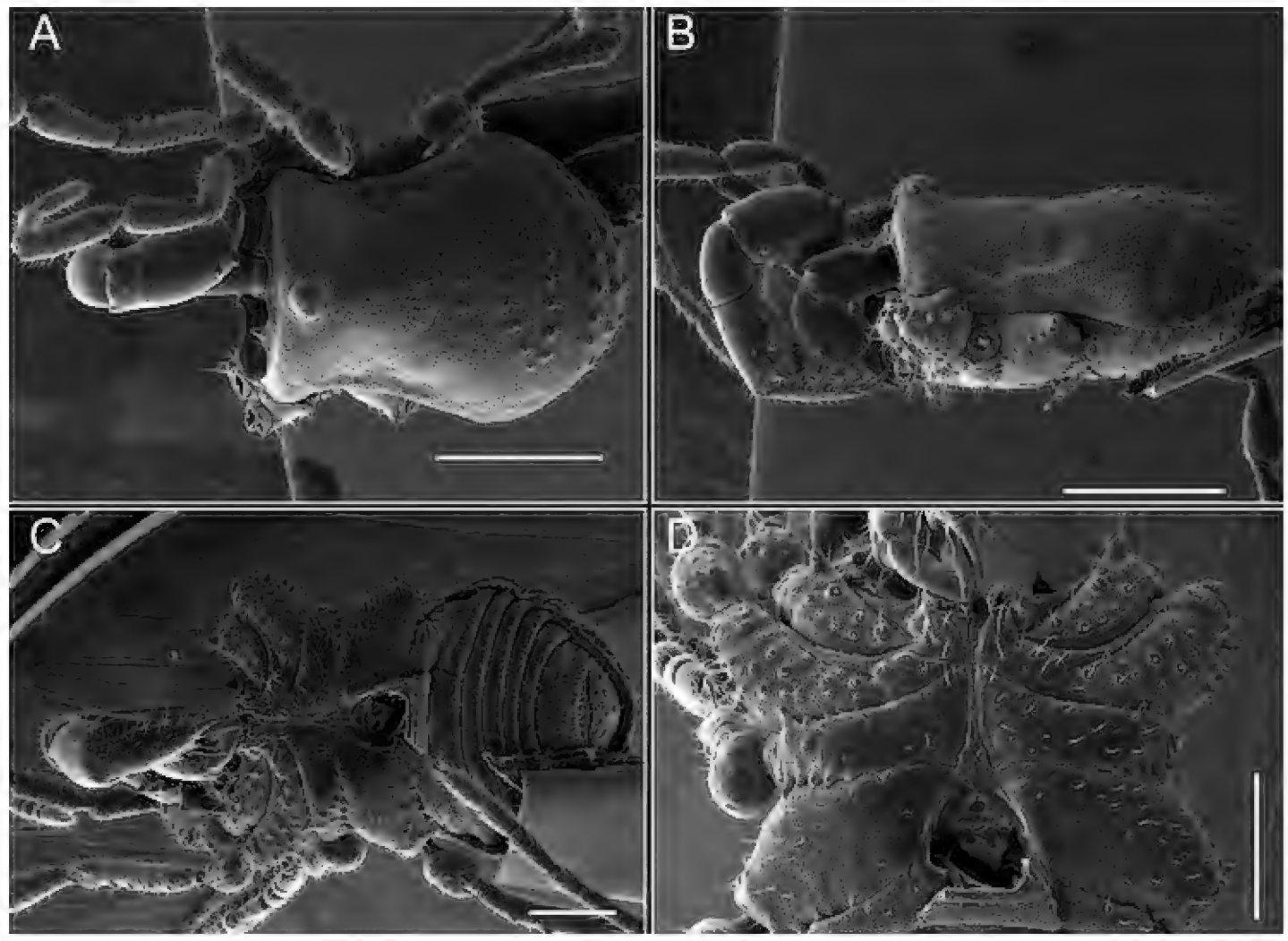

Figure 87. *Nerudiella cautin* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

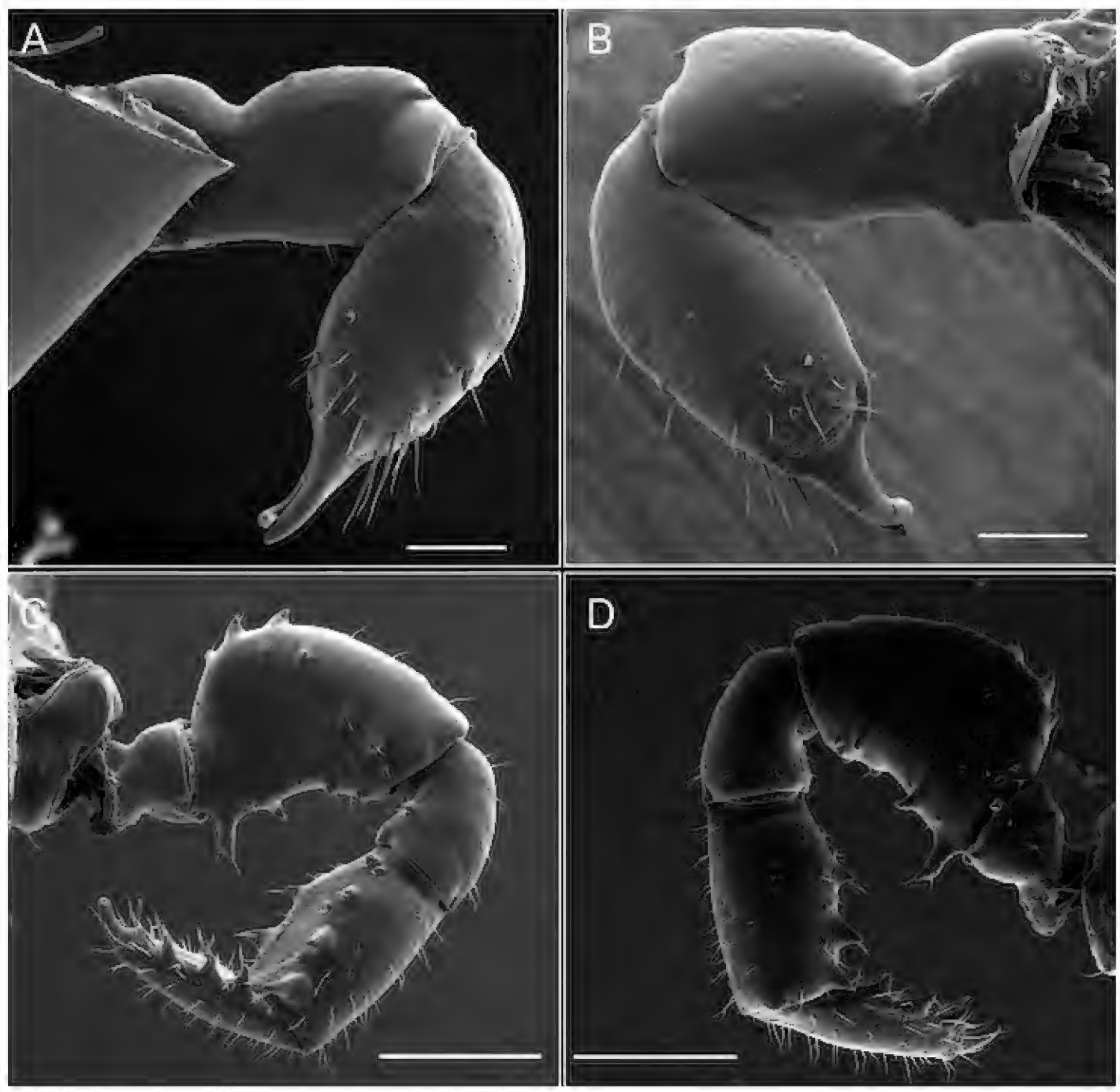

Figure 88. *Nerudiella cautin* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

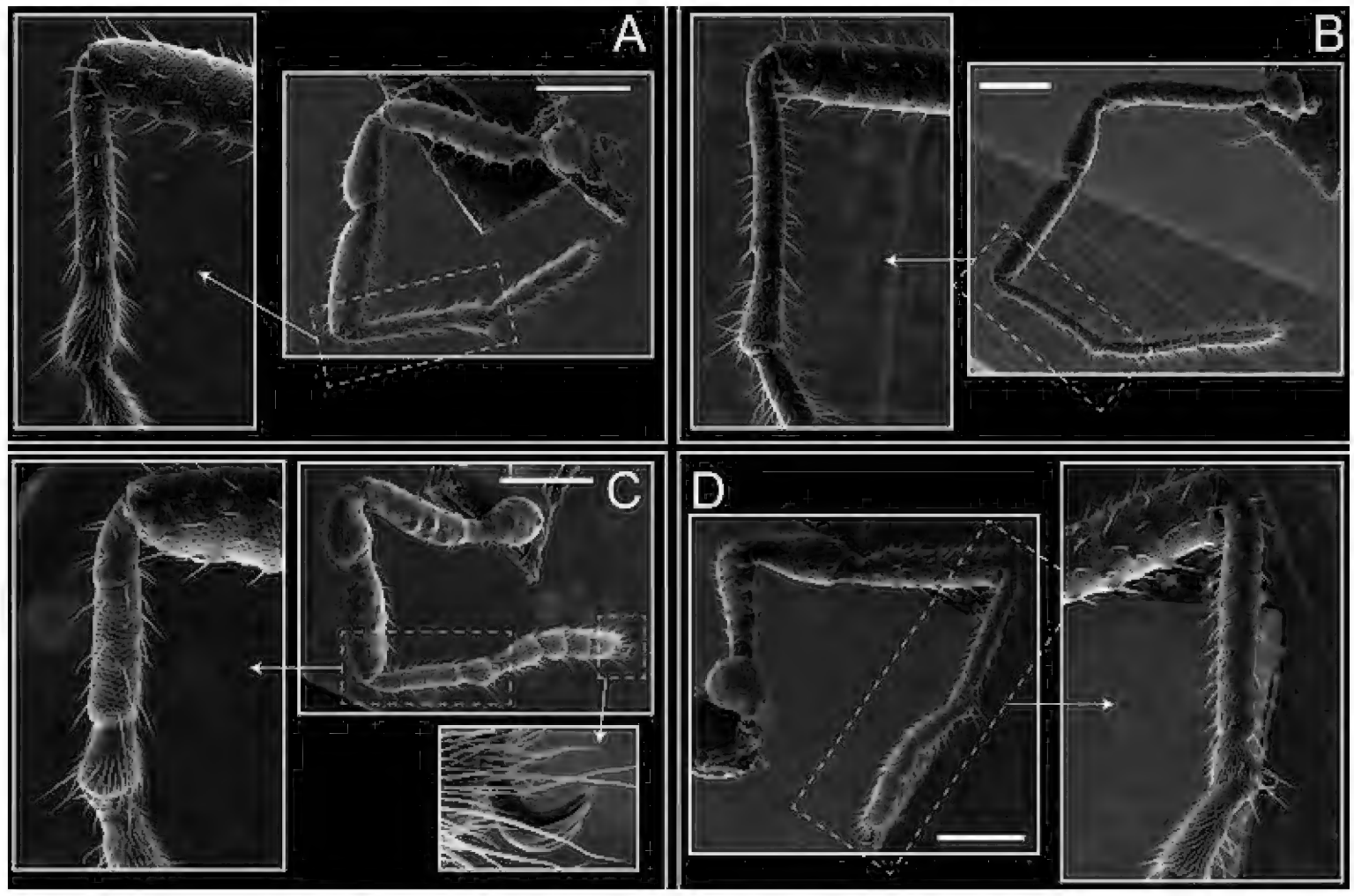

Figure 89. *Nerudiella cautin* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 µm.

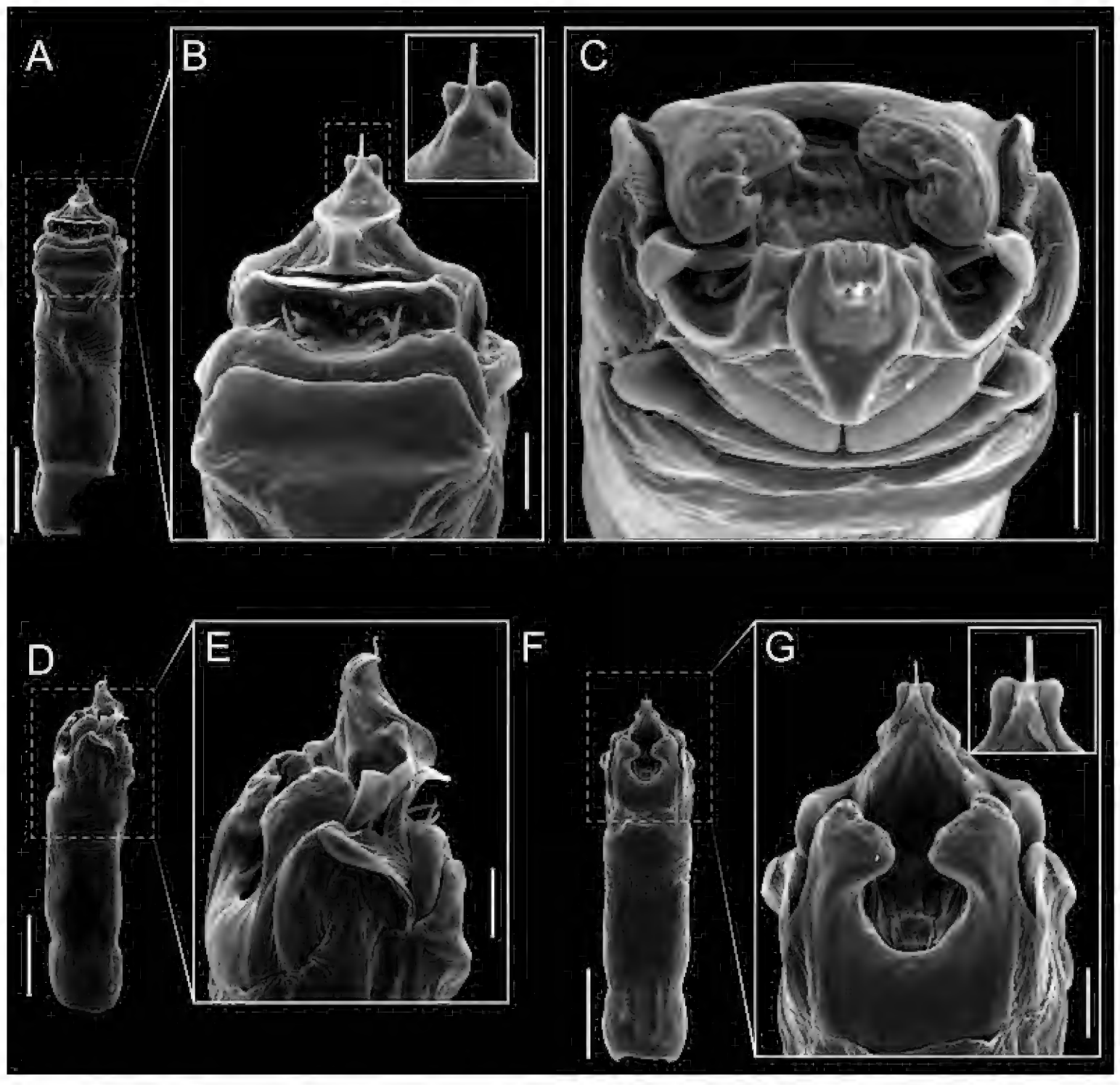

Figure 90. *Nerudiella cautin* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, E, G**).

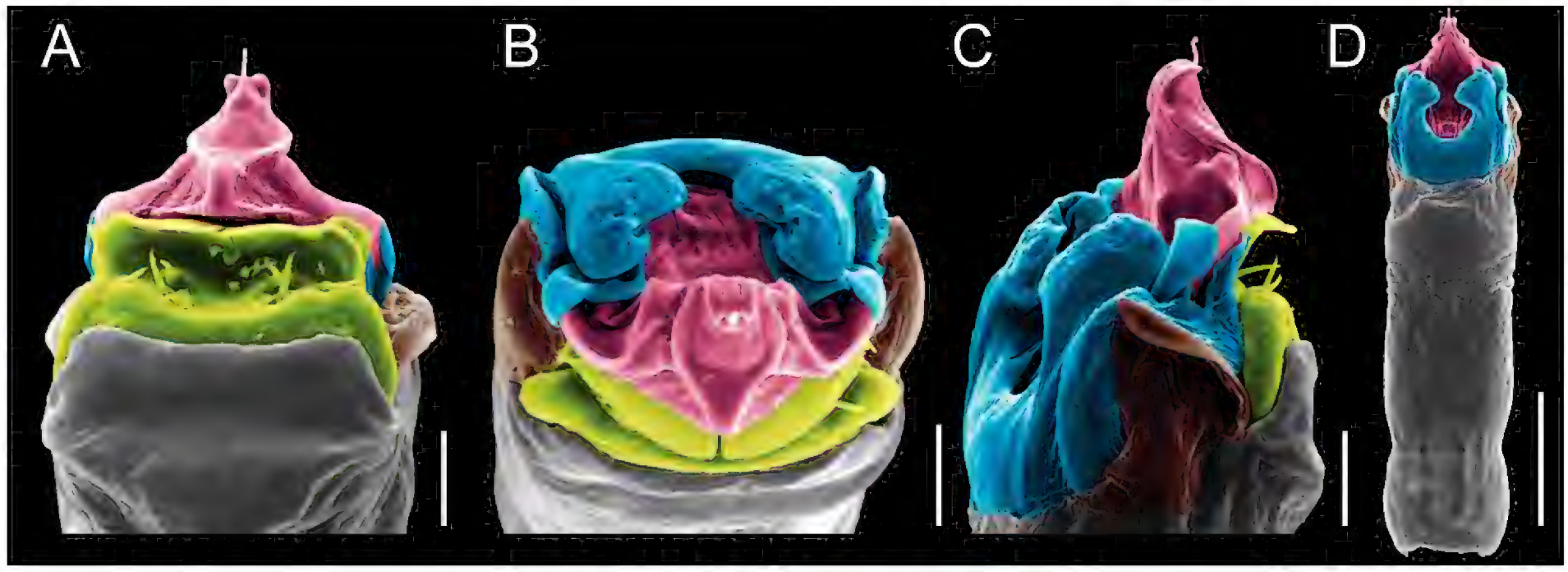

Figure 91. *Nerudiella cautin* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm.

Female. Similar to males, but with a noticeable shorter pedipalpal femora.

Female measurements. Total length 2.2, carapace length 1.00, dorsal scutum length 2.1, carapace max. width 1.3, mesotergum max. width 2.0. Appendage measurements: Pedipalps. Trochanter length 0.21, femora length 0.85, patella length 0.50, tibia length 0.50, tarsus length 0.63. Leg I: trochanter (tr) 0.22, femora (fe) 0.87, patella (pa) 0.47, tibia (ti) 0.66, metatarsus (mt) 0.76, tarsus (ta) 0.65. II: tr 0.25, fe 1.10, pa 0.60, ti 0.89, mt 0.99, ta 1.21. III: tr 0.25, fe 0.75, pa 0.36, ti 0.58, mt 0.61, ta 0.67, IV: tr 0.33, fe 1.05, pa 0.66, ti 0.89, mt 1.09, ta 0.78. Tarsal count 3–6–4–4.

***Nerudiella choapa* sp. nov.**

https://zoobank.org/B4A37CD7-79B1-49D3-9B3C-8ACC7193480E

Figs 92–97

Material examined. ***Holotype*.** ♂ **Chile.** Valparaíso: Pichicuy, Quebrada Huaquén, E. Maury coll., 25.X.1988 (MNHNCL). ***Paratypes*. Chile.** Coquimbo (Choapa province): Pichidangui, Cerro La Silla del Gobernador, E. Maury coll., 31.X.1988, 3 ♂ (MACN). Same data 6 ♀ 2 imm. (MACN).

Etymology. The specific epithet “choapa” is derived from one of the locality where the species was collected, the Choapa province in the Coquimbo region of Chile. It is used as noun in apposition to indicate the association of the species with this specific geographic location.

Diagnosis. This species can be distinguished from its congeners by several key characteristics. Firstly, its dorsal surface and pedipalps are densely setose. Additionally, the femora and tibia of the pedipalp are covered with small tubercles. The unique male genitalia has a capsula externa that covers the dorsal and lateral surfaces. The apical region of the capsula externa is bent at a 90-degree angle in relation to the axis of the genitalia, and there are two small parallel apical structures present. This species shares similarities with *Nerudiella zapallar* sp. nov., particularly in the apical region of the capsula externa, although it is relatively shorter in comparison in the latter species.

Distribution. Chile: Coquimbo and Valparaíso Regions (Fig. 4F).

Figure 92. *Nerudiella choapa* sp. nov. habitus, male **A** dorsal view **B** lateral view **C** ventral view. Scale bars: 1 mm.

Description of male holotype. Measurements: Total length 2.19, carapace length 0.94, dorsal scutum length 1.77, carapace max. width 1.33, dorsal scutum max. width 1.77. Appendage measurements: Pedipalps. Trochanter length 0.21, femora length 0.90, patella length 0.49, tibia length 0.70, tarsus length 0.86. Leg I: trochanter (tr) 0.21, femora (fe) 0.86, patella (pa) 0.45, tibia (ti) 0.67, metatarsus (mt) 0.82, tarsus (ta) 0.61. II: tr 0.20, fe 1.21, pa 0.53, ti 0.97, mt 1.07, ta 1.23. III: tr 0.24, fe 0.83, pa 0.39, ti 0.68, mt 0.77, tr 0.64. IV: tr 0.24, fe 1.19, pa 0.57, ti 0.96, mt 1.13, ta 0.75.

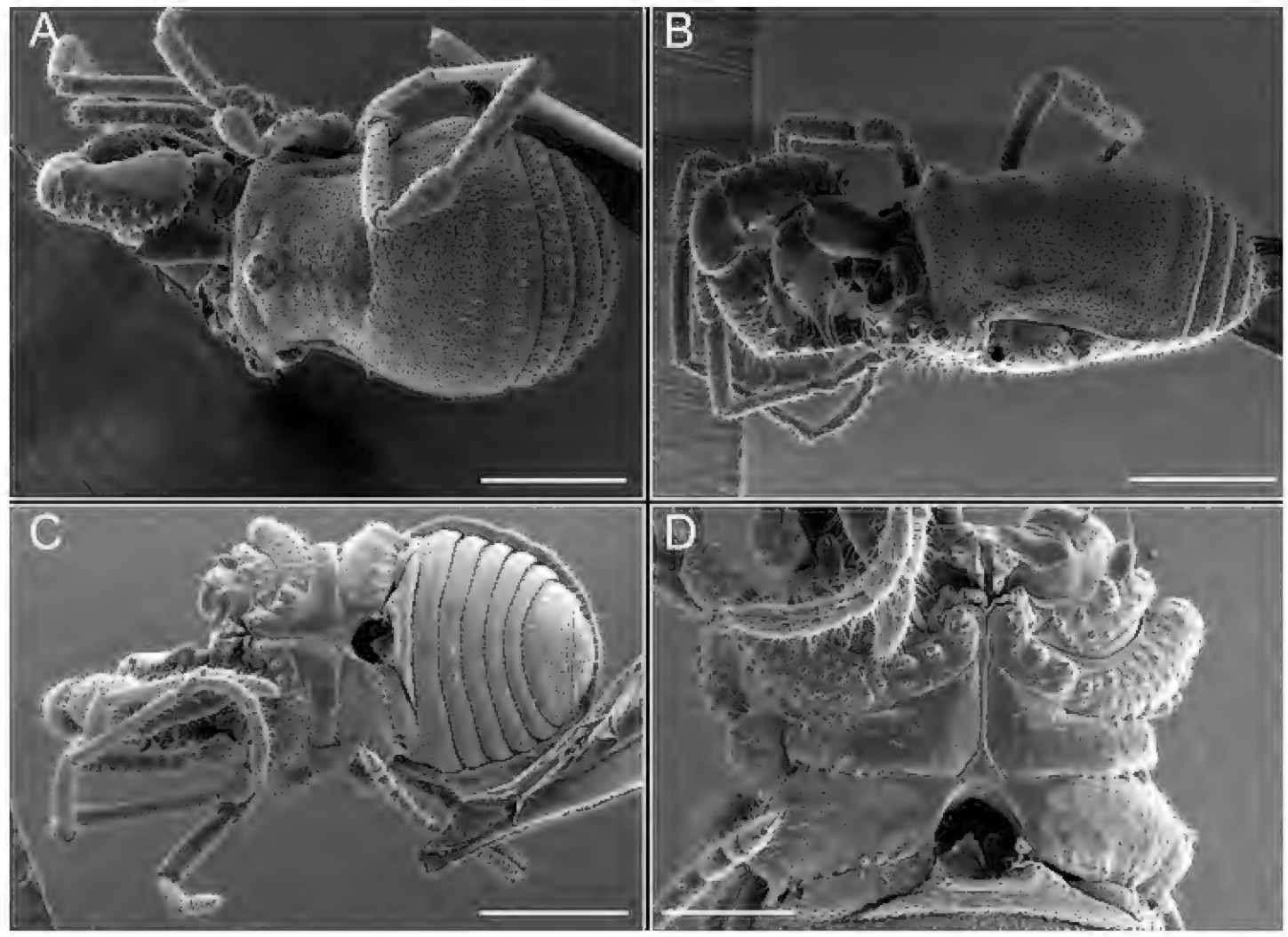

Figure 93. *Nerudiella choapa* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 μm (**D**).

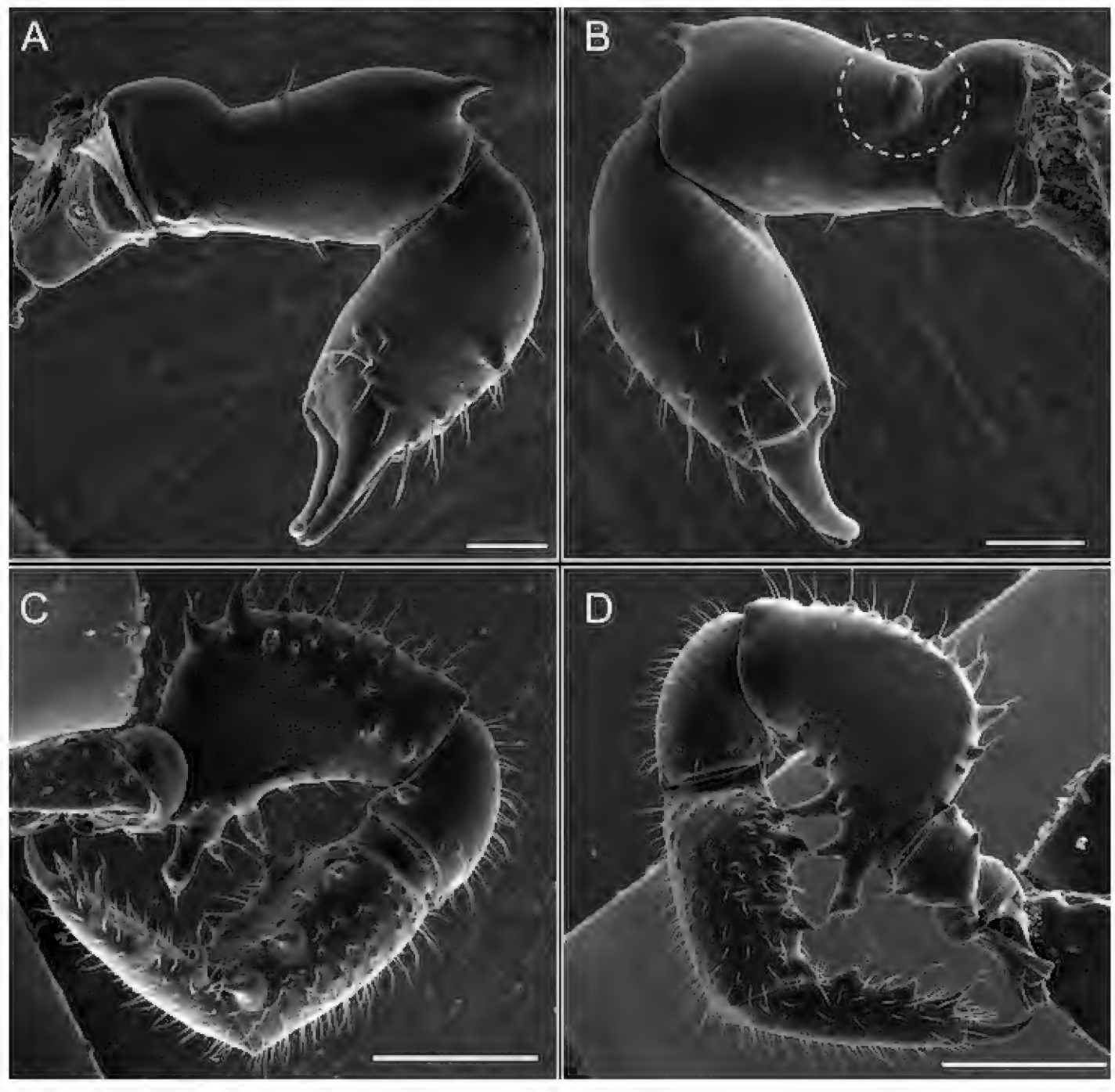

Figure 94. *Nerudiella choapa* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

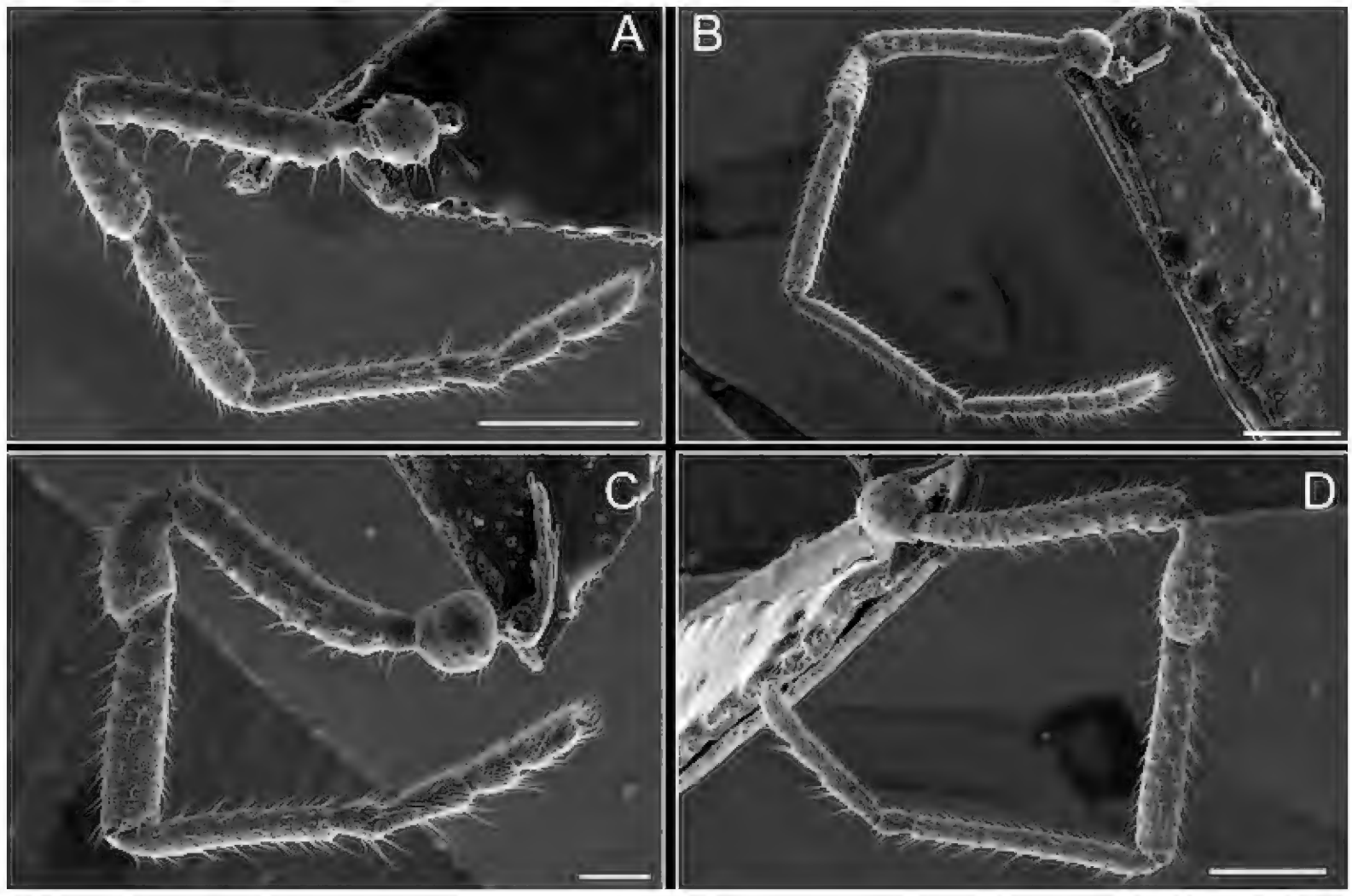

Figure 95. *Nerudiella choapa* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 μm (**A, B, D**); 200 μm (**C**).

Dorsum (Fig. 92, 93). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded, with small tubercles. Dorsal scutum and free tergites with microgranulation. Mesotergal areas lack clear separation but are covered with small setiferous tubercles.

Chelicerae (Fig. 94A, B). Segment I with a sharp tubercle on the dorso-distal surface, with two proximal tubercles. In segment II, there are scattered setae visible in both the ectal and ventral views. In the front view, there is a prominent triangular tubercle that stands out from the others.

Pedipalps (Fig. 94C, D). Trochanter with two small dorsal tubercles and one ventral tubercle. Femora with a dorso-mesal area with setiferous tubercles, including two stronger ones in the proximal region. In the ventral view, there are three prominent proximal spines and a row of small tubercles. Patella with a mesal setiferous tubercle. Tibia with three ventral-ectal spines and two ventral-mesal spines, with the lateral and dorsal areas with small setiferous tubercles. Tarsus with three mesal and ectal spines with subdistal setae, as well as additional setae and a few setae.

Legs (Fig. 95). Coxa I with 11–13 setiferous tubercles, the two apical ones being stronger and more prominent than the others. Coxa II with 18–20 setiferous tubercles, while coxa IV has 5–6 small tubercles. Bridges between legs do not obstruct the spiracles. The smooth surface occupies ~ 1/3 of leg II, ¾ of leg III, and < 1/3 of leg IV. Within smooth area of leg II, there are two small tubercles with subdistal setae on each side. Sternum arrow-shaped. Legs covered in small tubercles, and the astragalus is longer than the calcaneus on all legs (Fig. 95). Tarsal count: 3–5–4–4.

Penis (Figs 96, 97). Genitalia: Pars distalis with a ventral plate bearing a cleft that divides the plate into two lamellae. Each lamella has three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; cap-

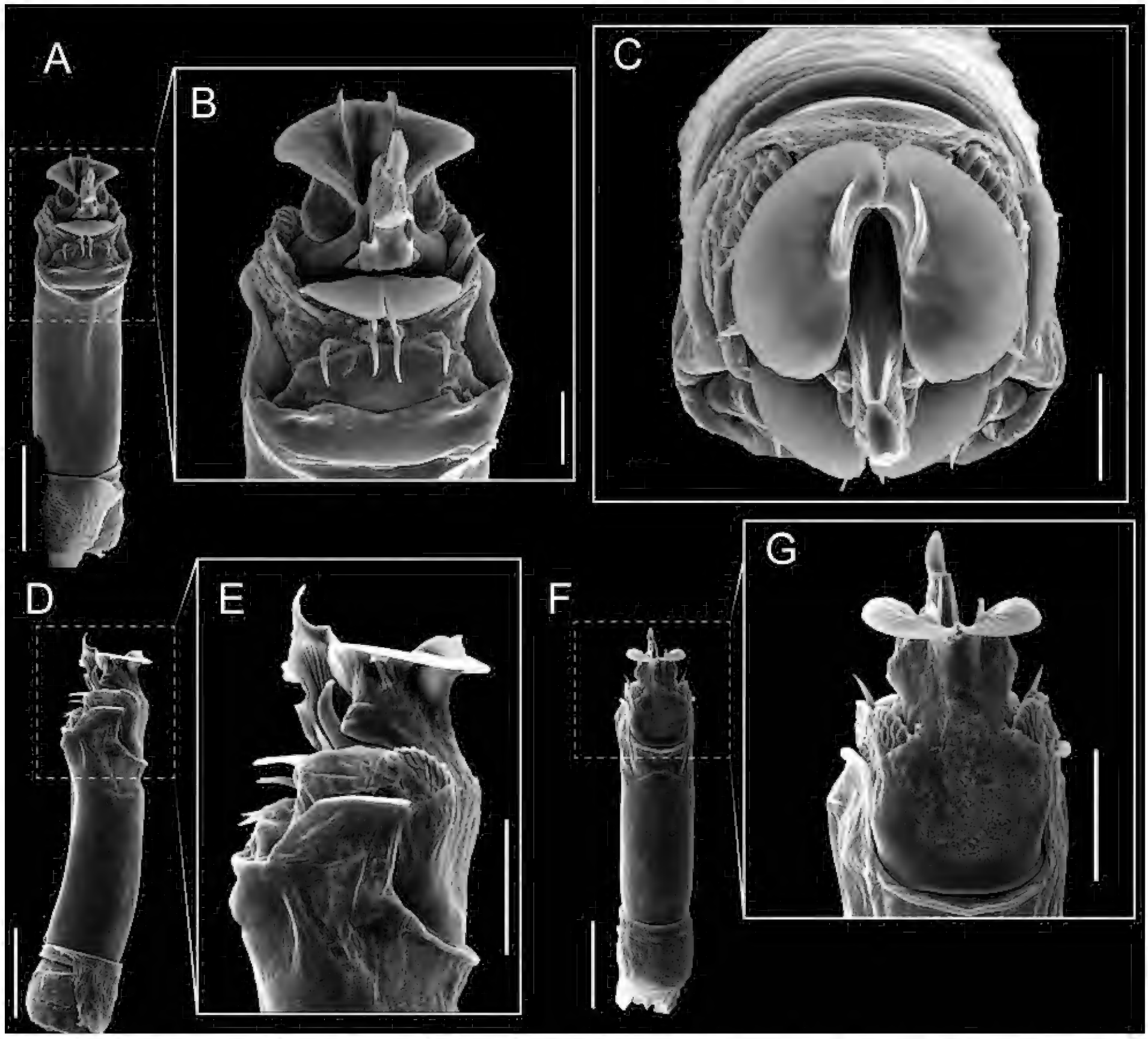

Figure 96. *Nerudiella choapa* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C**); 100 µm (**E, G**).

sula externa covering the dorsal and lateral surface, having the apical region bent at an angle of 90 ° in relation to the axis of the genitalia. It includes a pair of small apical processes in the form of small “wings”. The capsula interna also has a pair of lateral processes, which are long and ventrally sloping. Capsula interna longer than capsula externa, with its apical portion thinner.

Female. Similar to males, with shorter pedipalpal femora.

Female measurements. Total length 2.63, carapace length 1.0, dorsal scutum length 2.11, carapace max. width 1.47, mesotergum max. width 2.07. Appendage measurements: Pedipalps. Trochanter length 0.27, femora length 0.84, patella length 0.52, tibia length 0.61, tarsus length 0.92. Leg I: trochanter (tr) 0.28, femora (fe) 0.88, patella (pa) 0.48, tibia (ti) 0.68, metatarsus (mt) 0.84, tarsus (ta) 0.63. II: tr 0.29, fe 1.16, pa 0.56, ti 0.89, mt 1.05, ta 1.20. III: tr 0.28, fe 0.81, pa 0.38, ti 0.64, mt 0.84, ta 0.67, IV: tr 0.29, fe 1.18, pa 0.61, ti 0.98, mt 1.25, ta 0.75. Tarsal count 3–6–4–4.

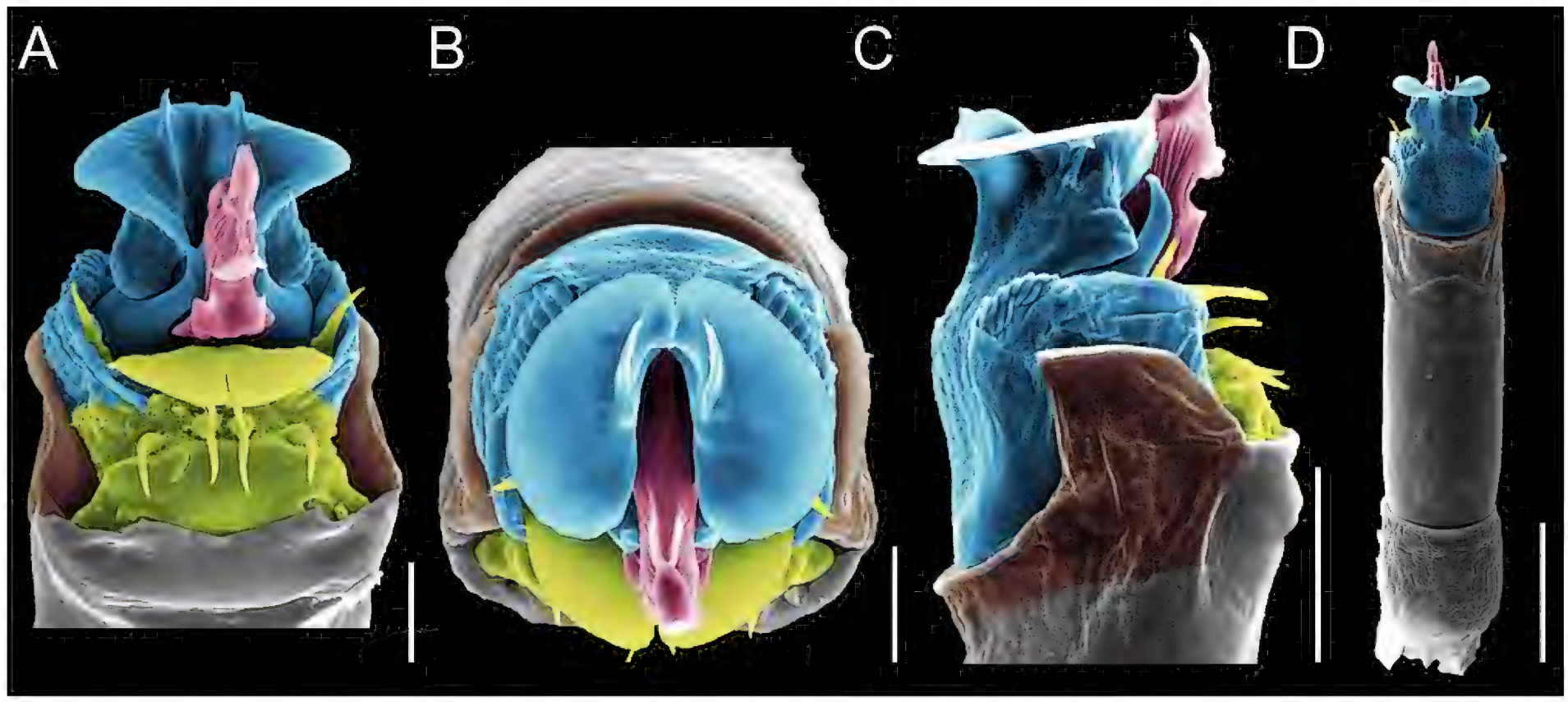

Figure 97. *Nerudiella choapa* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm (**A, B**); 100 μm (**C**); 200 μm (**D**).

***Nerudiella curi* sp. nov.**

https://zoobank.org/9F17E25B-8E00-4677-B1C3-9FD8DDAB3731

Figs 98–103

Material examined. ***Holotype*.** ♂ **Chile.** Curicó: Cerro Hueca-Hueca, J. Barriga coll., 10.12.2005 (MNHNCL). ***Paratypes*. Chile.** Curicó: Cerro Hueca-Hueca, J. Barriga coll., 10.12.2005, 3 ♂ 5 ♀ (MACN).

Etymology. The specific epithet is a variation of the spelling of "kuri" or "kurü," which is a word in the Mapuche language used to define the color black, which is present in spots on the dorsal surface of individuals of the group. Noun in apposition.

Diagnosis. This species can be readily distinguished from other species in the genus by several characteristics. Firstly, it exhibits a wider genital operculum compared to other species. Additionally, the male genitalia display a distinct morphology, featuring a capsula externa consisting of three lamellae. Furthermore, the ventral plate of the male genitalia is characterized by a row of aligned macrosetae.

Distribution. Chile: Maule Region, Curicó Province (Fig. 4F).

Description of male holotype. Measurements: Total length 2.59, carapace length 0.91, dorsal scutum length 2.03, carapace max. width 1.30, max. mesotergum width 1.77. Appendage measurements. Pedipalps. Trochanter length 0.22, femora length 0.69, patella length 0.37, tibia length 0.52, tarsus length 0.49. Leg I: trochanter (tr) 0.24, femora (fe) 0.89, patella (pa) 0.43, tibia (ti) 0.70, metatarsus (mt) 0.73, tarsus (ta) 0.70. II: tr 0.29, fe 1.11, pa 0.50, ti 0.96, mt 1.05, ta 1.20. III: tr 0.27, fe 0.75, pa 0.36, ti 0.66, mt 0.78, ta 0.63. IV: tr 0.32, fe 1.19, pa 0.63, ti 0.98, mt 1.26, ta 0.77.

Dorsum (Fig. 98, 99). Eta (η) hourglass-shaped dorsal scutum. Ocularium low on the body. Dorsal scutum microgranulate, without clear delimitation of distinct areas. In the anterior region, specifically areas I and II, there are two small setiferous tubercles. In the area III, there is a row of four small setiferous tubercles, while area IV is adorned with a row of eight small setiferous tuber-

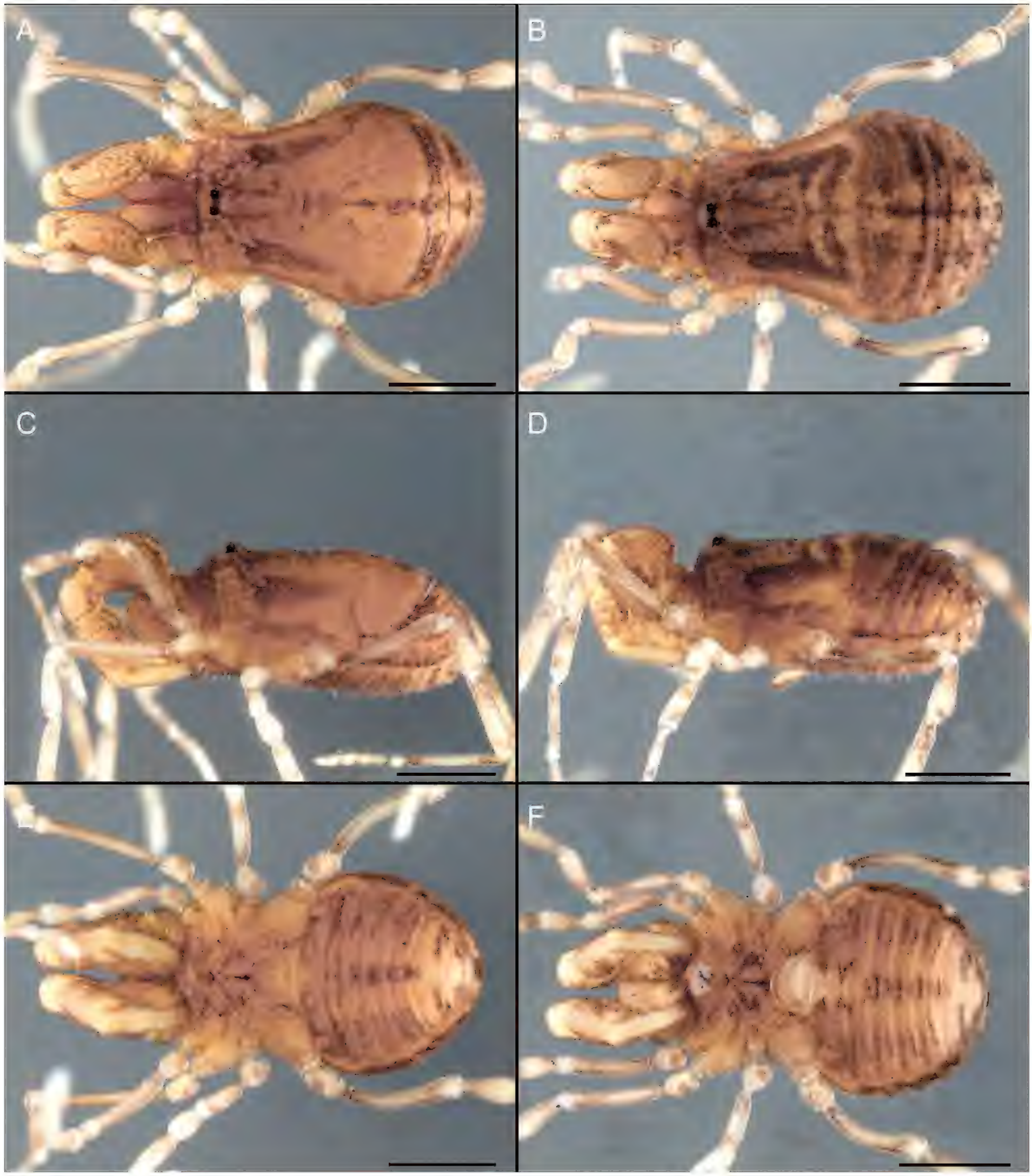

Figure 98. *Nerudiella curi* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

cles. Posterior margin of dorsal scutum with a row of eight small setiferous tubercles. Free tergites with a row of small setiferous tubercles.

Chelicerae (Fig. 100A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II with a small frontal tubercle and scattered setae.

Pedipalps (Fig. 100C, D). Trochanter with two small dorsal tubercles and one ventral. Femora with a row of three tubercles with subdistal setae on dorsal

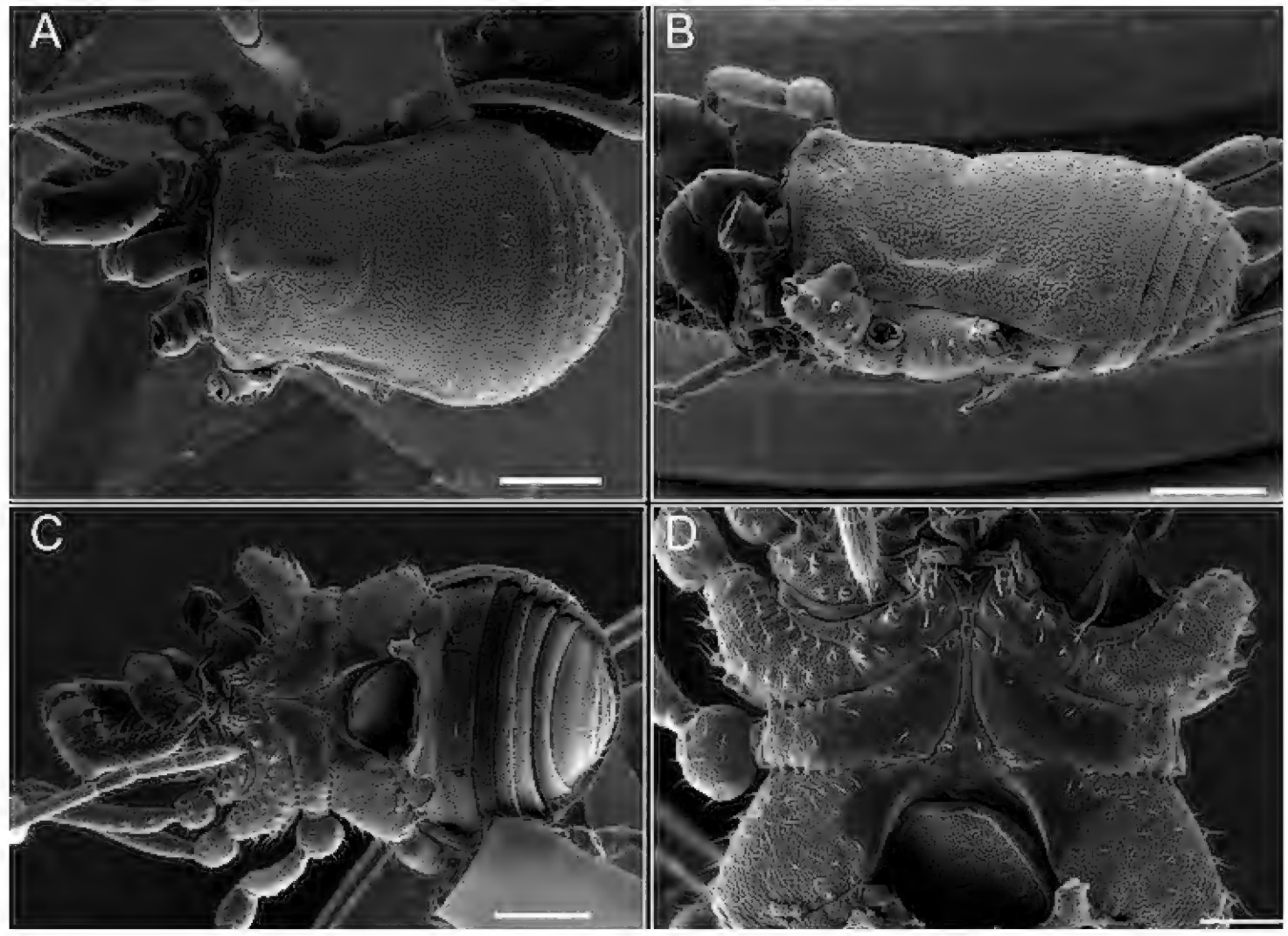

Figure 99. *Nerudiella curi* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

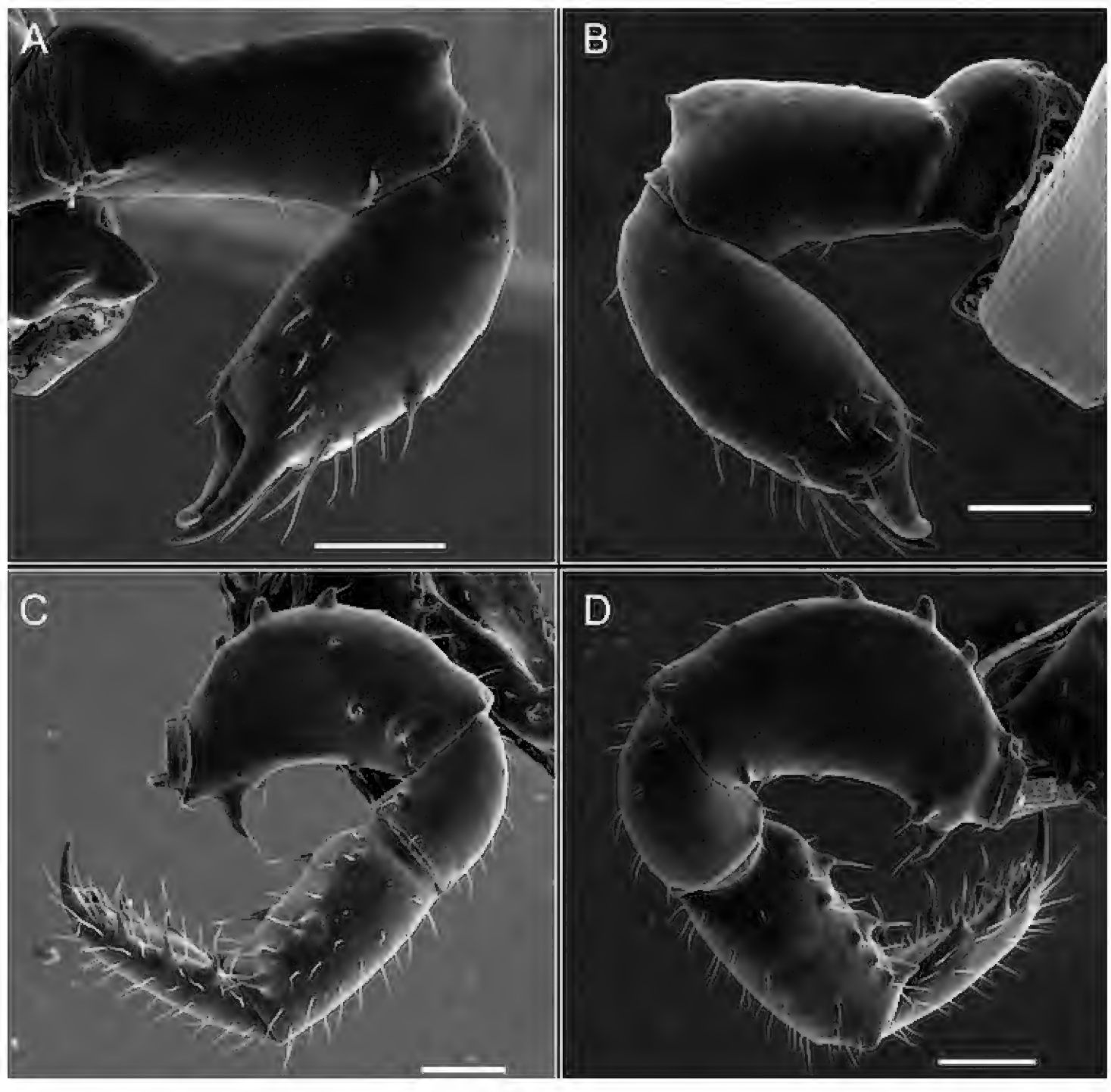

Figure 100. *Nerudiella curi* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

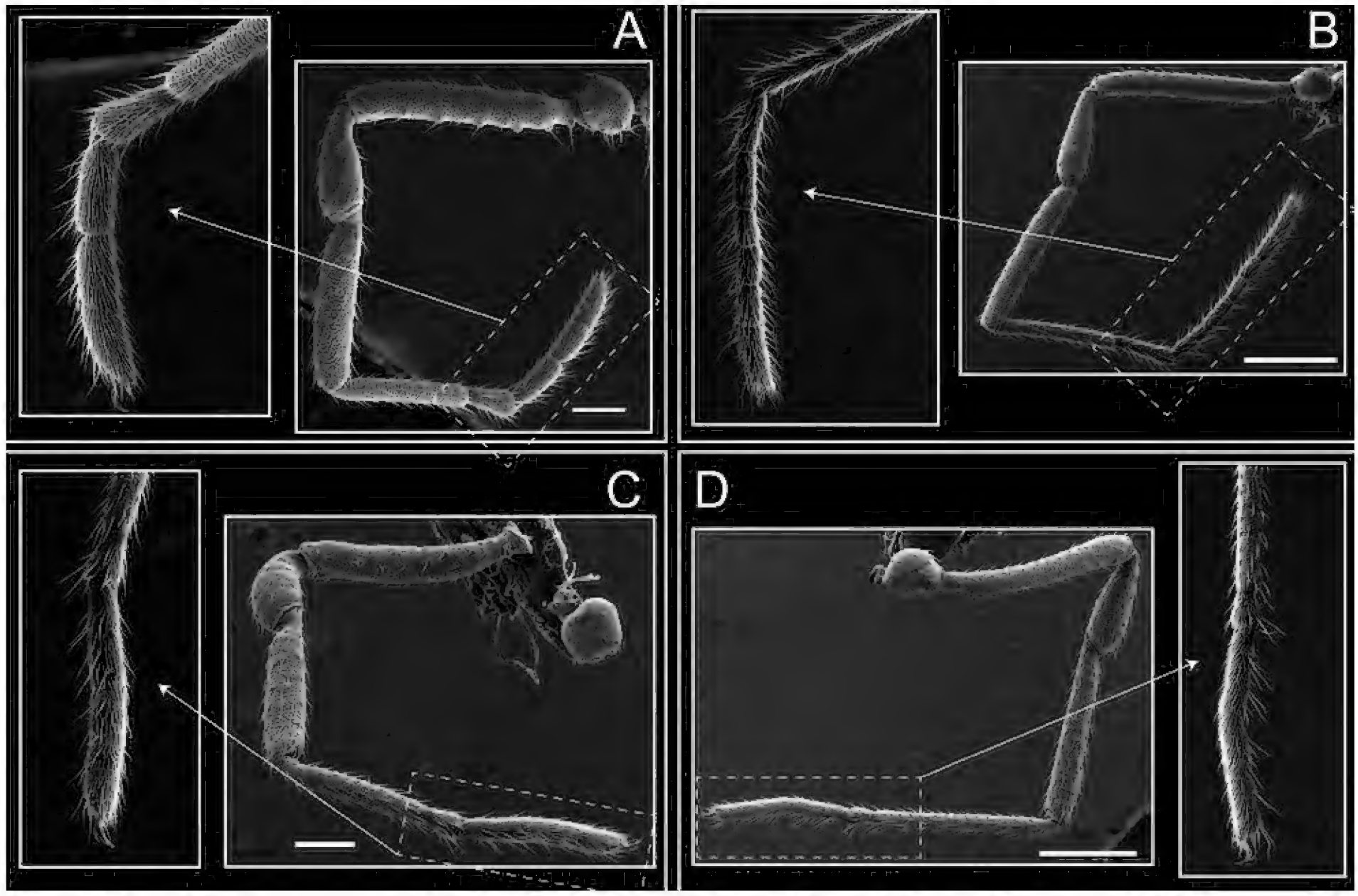

Figure 101. *Nerudiella curi* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm (**A, C**); 500 µm (**B, D**).

view, one long and one small spines with subdistal setae on ventral view, six low setiferous tubercles in mesal view, and one in ectal view. Patella with a small mesal and ectal setiferous tubercle. Tibia with a mesal row of five small ectal setiferous tubercles, three ventral ectal spines, and two ventral mesal spines with subdistal setae. Tarsus with three mesal and ectal spines with subdistal setae.

Legs (Fig. 101). Coxa I with two rows of setiferous tubercles and two distal setiferous tubercles with subdistal setae, coxa II with two rows of setiferous tubercles, III and IV only with microgranulation, three bridges between coxa legs II and III, six between coxa legs III and IV, four between leg IV and opisthosoma. Spiracles not obstructed by bridges. Smooth surface that occupies 1/3 of leg II, 3/4 of III and 1/3 of IV. Genital operculum larger than other species of the genus. Smooth area of leg II with a setiferous tubercle on each side. Sternum arrow-shaped. Legs I–IV covered in setae, tarsal area, and calcaneus densely setose. Calcaneus smaller than astragalus, ≥ 3× smaller (legs I–III) and 4× (leg IV). Tarsal count: 4–6–4–4.

Penis (Figs 102, 103). Pars distalis with a ventral plate bearing a cleft dividing the plate into two lamellae. Each lamella has a row of three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa covering the dorsal and lateral surface, divided into three folds, one pair covering the dorsolateral surface and the last one covering the dorsal surface, there is a dorsolateral plate attached to the pars basalis. Capsula interna divided into three parts, two lateral processes and a central process in which it bears an apical stylus. The ventral plate bears a cleft that divides the plate into two

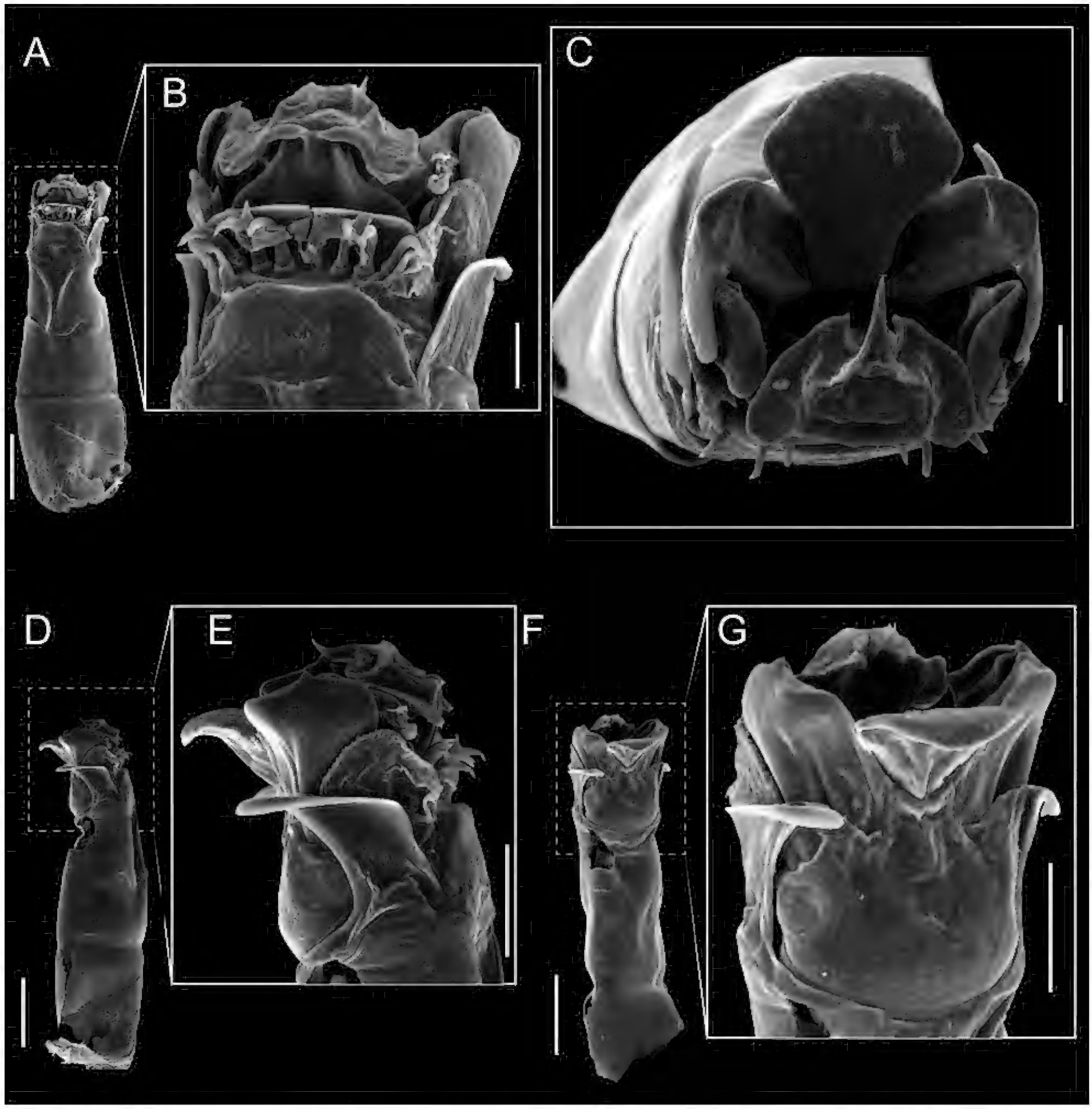

Figure 102. *Nerudiella curi* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C**); 100 µm (**E, G**).

halves, each with three ventral and one dorsal macrosetae. Ventral macrosetae arranged in a row.

Female. Similar to males, with shorter pedipalpal femora.

Female measurements. Total length 2.40, carapace length 0.85, dorsal scutum length 1.89, carapace max. width 1.23, mesotergum max. width 1.67. Appendage measurements: Pedipalps. Trochanter length 0.22, femora length 0.69, patella length 0.37, tibia length 0.52, tarsus length 0.49. Leg I: trochanter (tr) 0.14, femora (fe) 0.24, patella (pa) 0.89, tibia (ti) 0.43, metatarsus (mt) 0.70, tarsus (ta) 0.73. II: tr 0.70, fe 0.29, pa 1.11, ti 0.50, mt 0.96, ta 1.05. III: tr 1.20, fe 0.27, pa 0.75, ti 0.36, mt 0.66, ta 0.78. IV: tr 0.63, fe 0.32, pa 1.19, ti 0.63, mt 0.98, ta 1.26, tr 0.77.

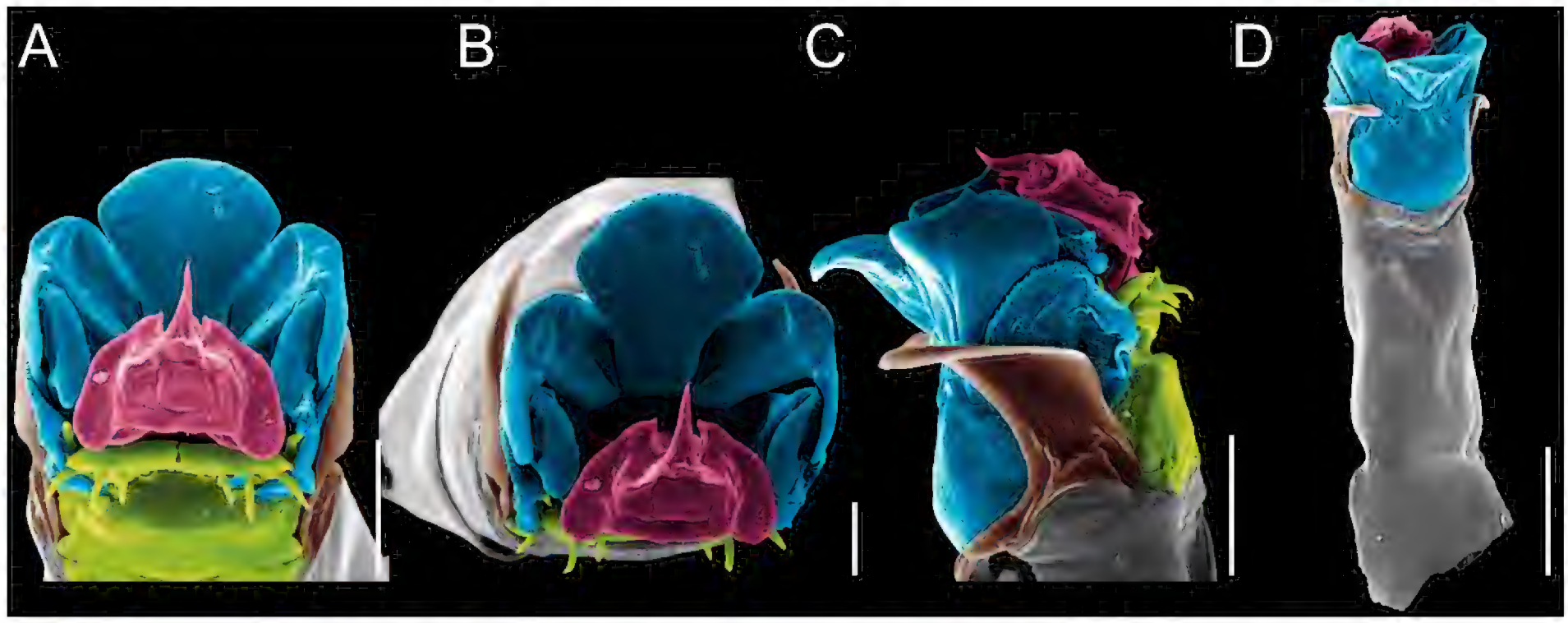

Figure 103. *Nerudiella curi* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm (**A, B**); 100 μm (**C**); 200 μm (**D**).

***Nerudiella goroi* sp. nov.**

https://zoobank.org/83521462-412E-44DC-8DEB-07C518E25495

Figs 104–109

Material examined. ***Holotype*.** ♂ **Chile.** Concepción: Estero Nonguén, T.Cekalovic coll., 21.IV.1976 (MNHNCL). ***Paratypes*. Chile.** Concepción: 6 km S San Pedro, 360 m, A. Newton, M. Thayer coll., 12.XII.1982, 1 ♂ (AMNH). Camino a Ramuncho, Cruce Hualpén, T.Cekalovic coll., 02.XI.1986, 4 ♂ 1 ♀ 18 imm. (MACN). Cautín: Ojos del Caburgua, 16 km NE de Pucón, E. Maury coll., 16.I.1987, 1 ♂ 7 ♀ 6 imm. (MACN). Bellavista, Lago Villarrica, 260 m, R.Schuh, N. Platnick coll., 30.I.1986, 1 ♂ 4 ♀ 7 imm. (AMNH). Cautín: Cerro Ñielol Temuco, IX Región (Araucaria), E. Maury coll., 21.I.1991, 1 ♂ 1 imm. (MACN). Cautín: Cerro Ñielol Temuco, IX Región (Araucaria), E. Maury coll., 15.I.1989, 3 ♀ 2 imm. (MACN). Termas de Palguin SE de Pucón, E. Maury coll., 17.01.1987, 1 ♀ 1 imm. (MACN). Estero Chauilco, T.Cekalovic coll., 25.I.1980, 1 ♀ (MACN)

Additional material. Chile. Cautín: Bellavista, Fundo Flor del Lago, 40.6663°S, 72.1733°W, 270 m, M. Ramírez, F. Labarque coll., 09.02.2005, 3 ♂ 5 ♀ 12 imm. (MACN). Same data, 2 ♀ 31 imm. (MACN). Same data 3 ♂ 1 ♀ 2 imm. (MACN). Cautín: Volcán, Villarrica, 1100 m, N. Platnick, O. Francke coll., 28.I.1985, 2 imm. (AMNH). Bellavista, Lago Villarrica, N. Platnick, O. Francke coll., 28.I.1985, 2 ♂ 2 ♀ 4 imm. (AMNH). Bellavista, Lago Villarrica, 260 m, R.Schuh, N. Platnick coll., 30.01.1986, 2 imm. (AMNH). Same locality N. Platnick, K.Catley, M. Ramírez, T.Allen coll., 20.XI.1993, 1 ♂ 1 ♀ 1 imm. (AMNH). Osorno: Pucatrihue, L.Peña coll., 10.II.1985, 2 imm. (FMNH).

Etymology. The specific epithet is bestowed upon the Chilean entomologist Raúl Briones Parra, widely recognized by his nickname “Goro”, in recognition to his significant contributions to the field of entomology and his unwavering dedication to the conservation of the Chilean forests. A noun in apposition.

Diagnosis. This species can be easily distinguished from the other species in the genus by having two sharp tubercles on the ventral-proximal region of the pedipalp femora. The male genitalia has a pair of ventrally curved capsula externa processes.

Figure 104. *Nerudiella goroi* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

Distribution. Chile: Regions of Bío-Bío, Araucanía, Los Ríos, Los Lagos.

Description of male holotype. Total length 3.9. Carapace length 1.1, dorsal scutum length 2.5, carapace max. width 1.4, mesotergum max. width 1.6. Appendage measurements. Pedipalps. Trochanter length 0.25, femora length 0.94, patella length 0.60, tibia length 0.70, tarsus length 0.68. Leg I: trochanter (tr) 0.27, femora (fe) 1.37, patella (pa) 0.59, tibia (ti) 0.90, metatarsus (mt) 1.13, tarsus (ta) 0.83. II: tr 0.28, fe 1.75, pa 0.79, ti 1.30, mt 1.50, ta 1.73. III: tr 0.32,

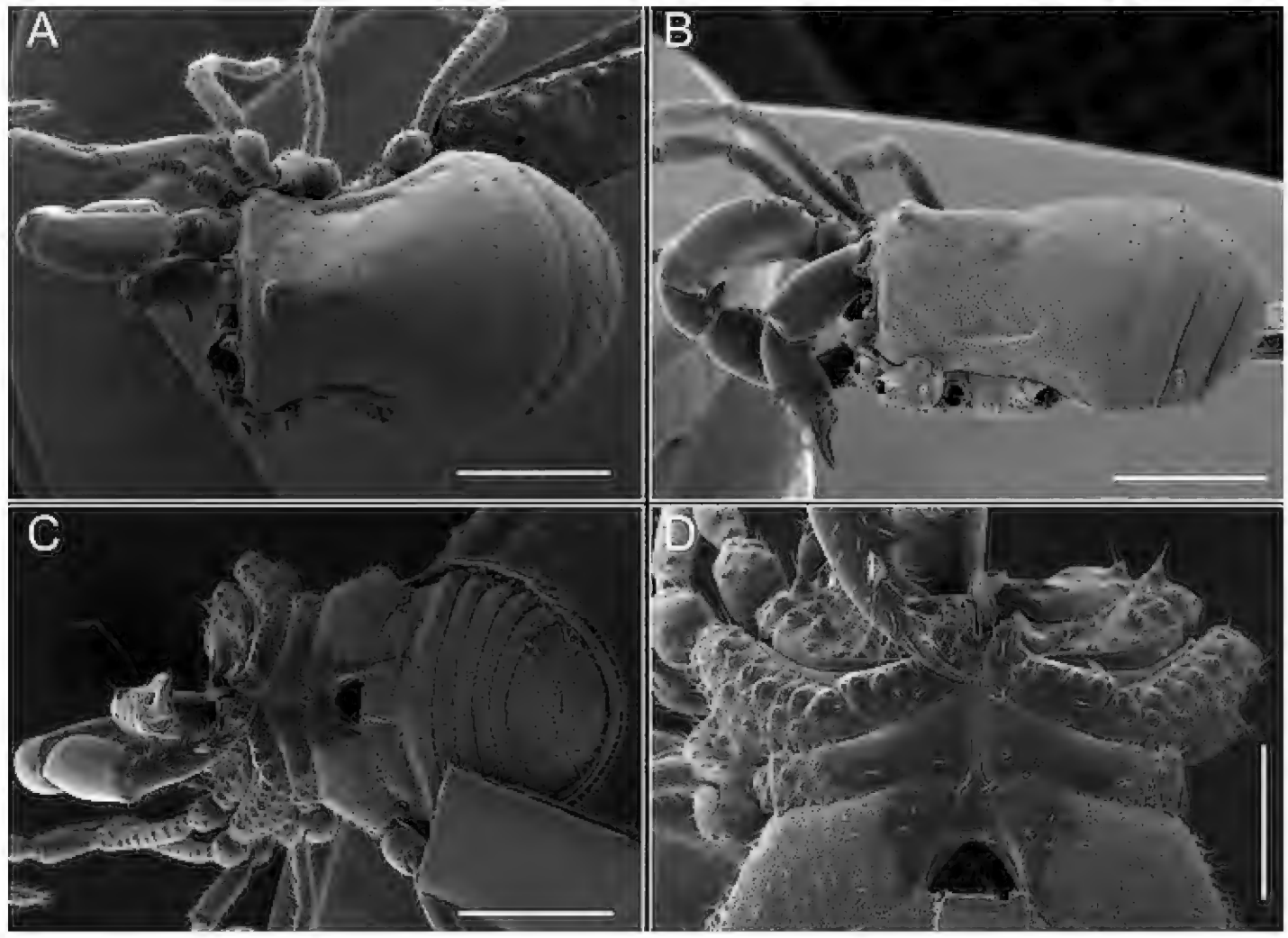

Figure 105. *Nerudiella goroi* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 µm (**D**).

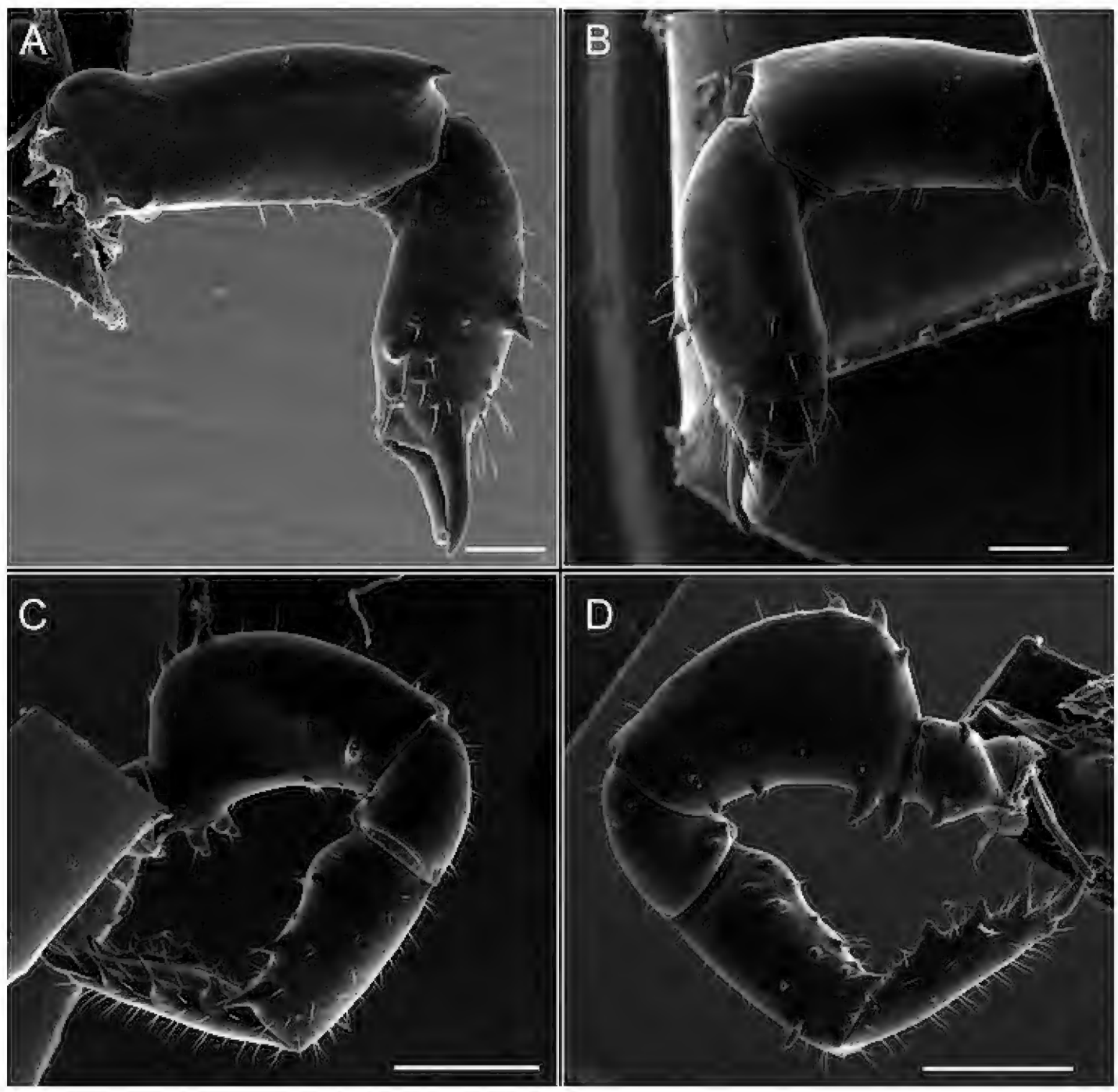

Figure 106. *Nerudiella goroi* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm (**A, B**); 500 µm (**C, D**).

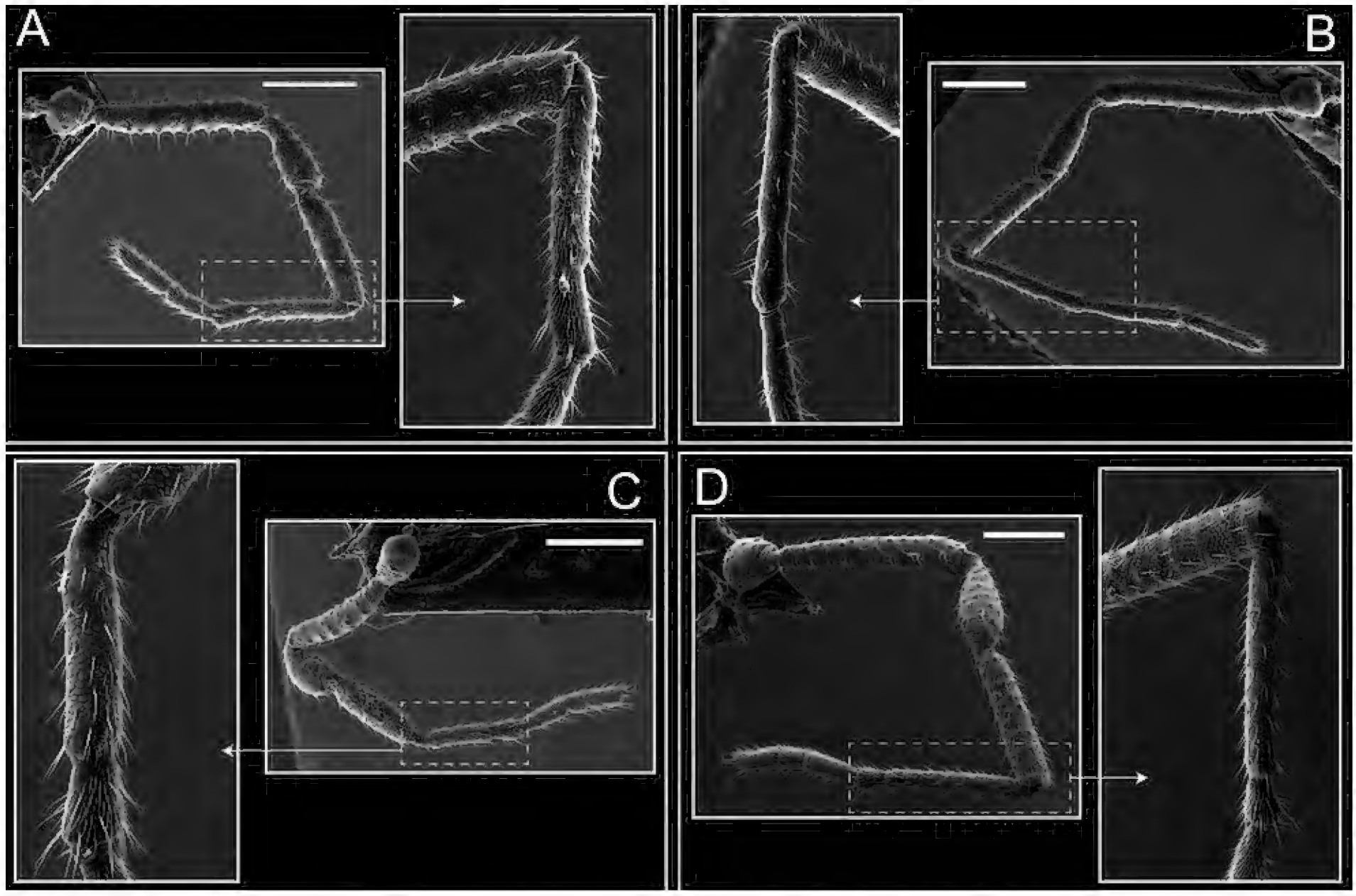

Figure 107. *Nerudiella goroi* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 µm.

fe 1.12, pa 0.50, ti 0.71, mt 0.99, ta 0.86. IV: tr 0.41, fe 1.53, pa 0.84, ti 1.26, mt 1.69, ta 1.04.

Dorsum (Fig. 104, 105). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded. Dorsal scutum microgranulate, with mesotergal areas that lack distinct demarcation but with small setiferous tubercles. Additionally, the mesotergal areas, posterior edge, and free tergites feature a row of small setiferous tubercles.

Chelicerae (Fig. 106A, B). Segment I with an acute tubercle on the dorso-distal surface. Segment II bearing scattered setae in ectal and ventral views, with one triangular tubercle prominent from the others in front view.

Pedipalps (Fig. 106C, D). Trochanter with a small dorsal and ventral tubercle. Femora bearing three dorsoproximal setiferous tubercles; 4–6 small ventral-distal tubercles and two ventral-proximal spines. Patella with 2–3 small ventral tubercles. Tibia possesses two prominent ventral-mesal spines, in addition to small sparse setiferous tubercles. Tarsus with three mesal and ectal spines in addition to setae and sparse setae.

Legs (Fig. 107). Coxa I with 10 setiferous tubercles, II with 18–20 setiferous tubercles, III with three. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III and < ⅓ of IV. Smooth area of leg II with 3 tubercles with subdistal setae on each side. Sternum arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 4–8–4–4.

Penis (Figs 108, 109). Pars distalis characterized by a ventral plate divided into two halves by a small cleft. Each half of the plate bears three pointed

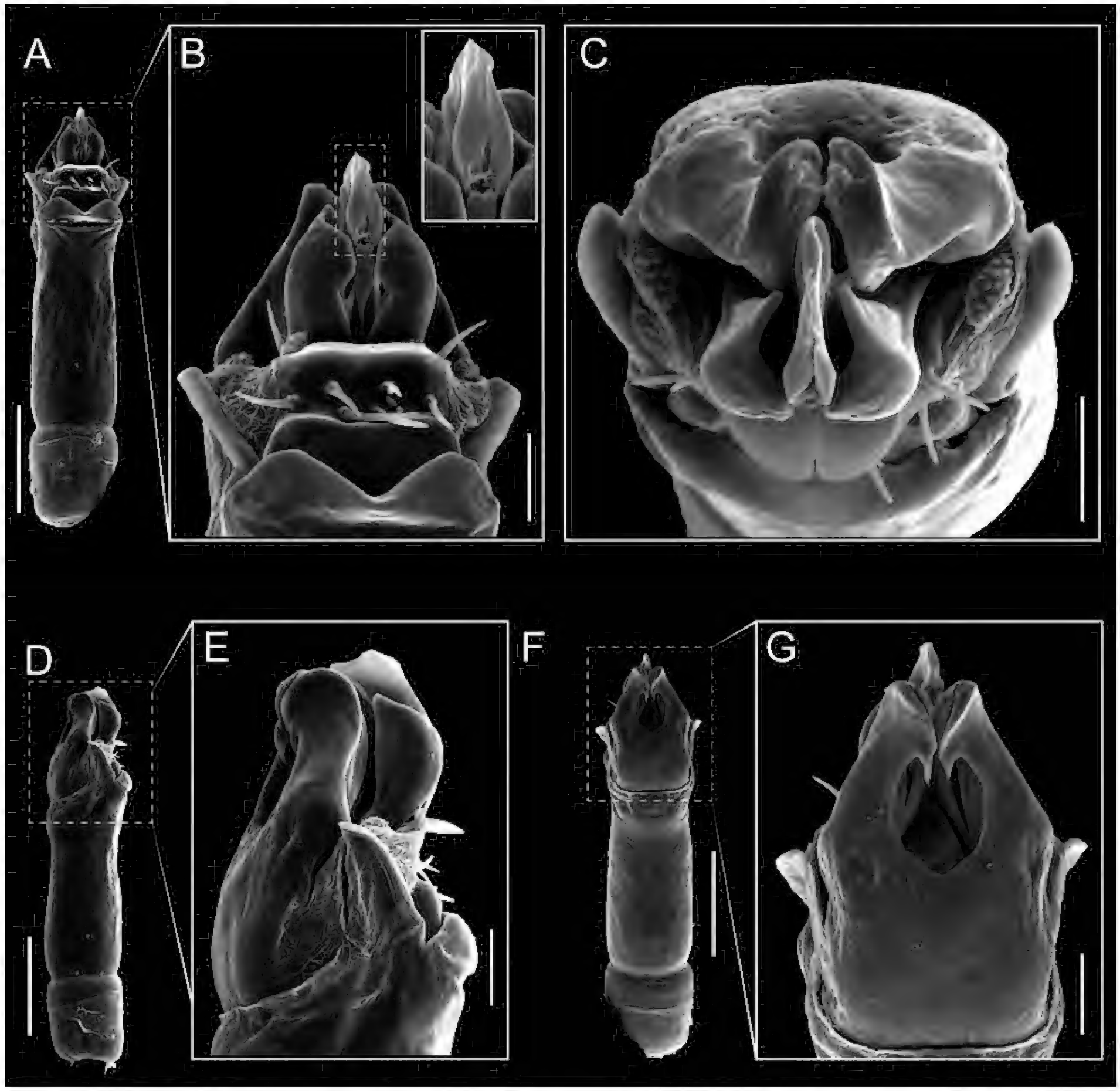

Figure 108. *Nerudiella goroi* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 50 μm (**B, C, E, G**).

macrosetae on the ventral surface and one small macroseta on the dorsal surface. The dorsal surface is covered by a capsula externa, with the upper portion of the plate featuring a wide notch that forms a pair of sharp pointed processes at the base of the genitalia. The capsula externa also exhibits a pair of broad lateral processes. It is slightly lower than the capsula interna, which is laterally flattened and compressed between the lateral processes of the capsula externa. The capsula interna does not have a visible stylus. Additionally, there is a dorsolateral plate connected to the pars basalis.

Female. Similar to males, with a shorter pedipalpal femora.

Female measurements. Measurements: Total length 2.50, carapace length 1.1, dorsal scutum length 2.17, carapace max. width 1.55, mesotergum max. width. Appendage measurements: Pedipalps. Trochanter length 0.26, femora

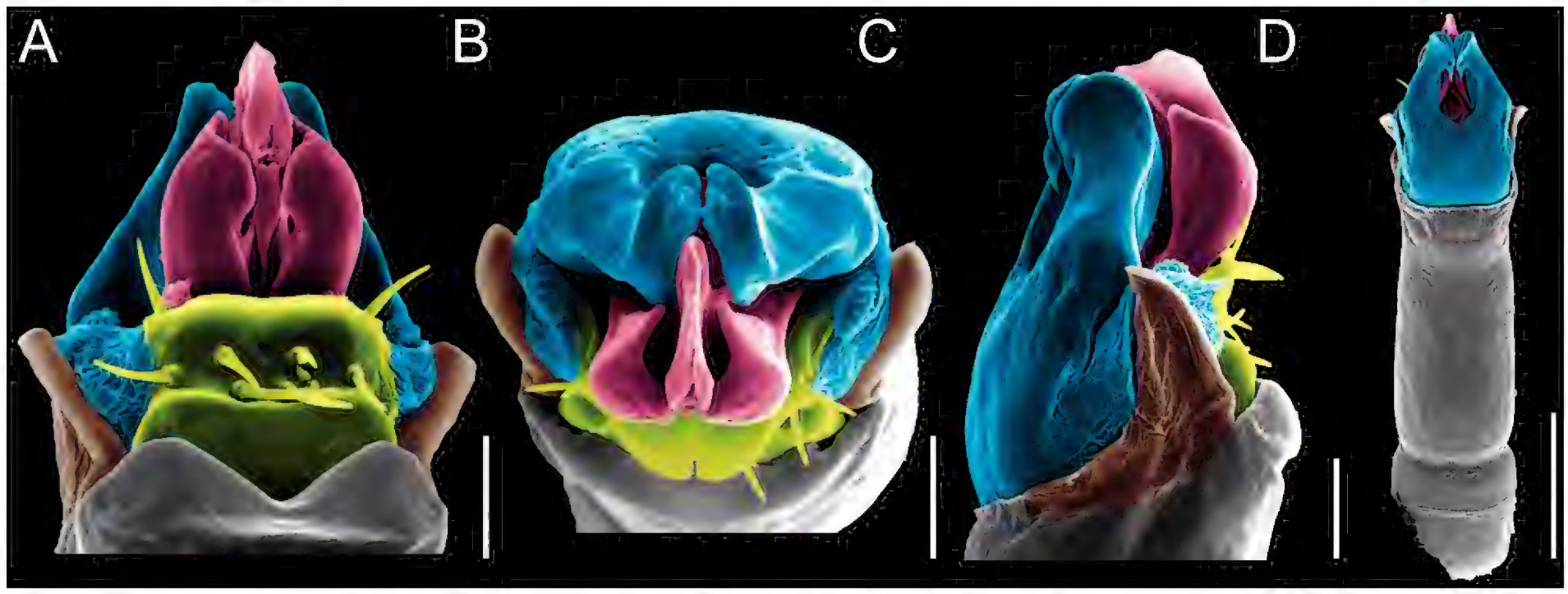

Figure 109. *Nerudiella goroi* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm.

length 0.90, patella length 0.55, tibia length 0.57, tarsus length 0.67. Leg I: trochanter (tr) 0.25, femora (fe) 0.96, patella (pa) 0.53, tibia (ti) 0.71, metatarsus (mt) 0.84, tarsus (ta) 0.64. II: tr 0.24, fe 1.27, pa 0.65, ti 0.98, mt 1.12, ta 1.27. III: tr 0.27, fe 0.82, pa 0.41, ti 0.61, mt 0.71, ta 0.69. IV: tr 0.31, fe 1.19, pa 0.74, ti 1.03, mt 1.26, ta 0.79. Tarsal count: 4–8–4–4.

Nerudiella jaimei sp. nov.

https://zoobank.org/4986C4AB-EB4A-4F3E-86F6-063A7C4604B7

Figs 110–115

Material examined. ***Holotype***. ♂ **Chile.** Malleco. Monumento Natural Contulmo, 350 m, S. Peck, J. Peck coll. (FMNH). ***Paratypes***. **Chile.** Malleco. P.N. Nahuelbuta 1250 m, Berlese, N. Platnick, R. Schuh coll.19.XI.1981. 1 ♂ 2 imm. (AMNH). Same data, 4 ♂ 4 imm. (AMNH). Malleco. Monumento Natural Contulmo, 300 m, N. Platnick, R. Schuh coll.31.1.1986 2 ♀ 4 imm. (AMNH). Malleco. Monumento Natural Contulmo, 350 m, S. Peck, J. Peck coll. 13.II.1985. 5 ♂ 6 ♀ 13 imm. (FMNH). 45 KM W Angol, Nahuelbuta N.P. 1500 m, S. Peck, J. Peck coll. 09.XII.1984. 11 ♂ 6 ♀ 13 imm. (FMNH).

Etymology. The specific epithet is bestowed upon the Chilean entomologist Jaime Pizarro Araya, in recognition to his significant contributions to the field of entomology and his unwavering dedication to the conservation of the Chilean forests. A noun in apposition.

Diagnosis. This species can be distinguished from the other species of the genus by the morphology of the male genitalia, which includes the capsula externa with a robust process, which forms a dorsally curved plate.

Distribution. Chile: Araucanía Region (Fig. 4F).

Description of male holotype. Measurements: Total length 4.0, carapace length 1.0, dorsal scutum length 2.5, carapace max. width 1.2, mesotergum max. width 1.7. Appendage measurements: Pedipalps. Trochanter length 0.26, femora length 0.96, patella length 0.59, tibia length 0.74, tarsus length 0.69. Leg I: trochanter (tr) 0.19, femora (fe) 0.70, patella (pa) 0.40, tibia (ti) 0.52, metatarsus (mt) 0.63, tarsus (ta) 0.55. II: tr 0.23, fe 0.91, pa 0.50, ti 0.78, mt 0.80, ta

Figure 110. *Nerudiella jaimei* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

0.92. III: tr 0.22, fe 0.58, pa 0.34, ti 0.47, mt 0.50, ta 0.53. IV: tr 0.26, fe 0.89, pa 0.51, ti 0.75, mt 0.94, ta 0.63.

Dorsum (Fig. 110, 111). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded in shape. The dorsal scutum microgranulate, and both the opisthosoma and free tergites display rows of small setiferous tubercles. It is worth noting that the tubercle bases of these setiferous tubercles increase in length posteriorly.

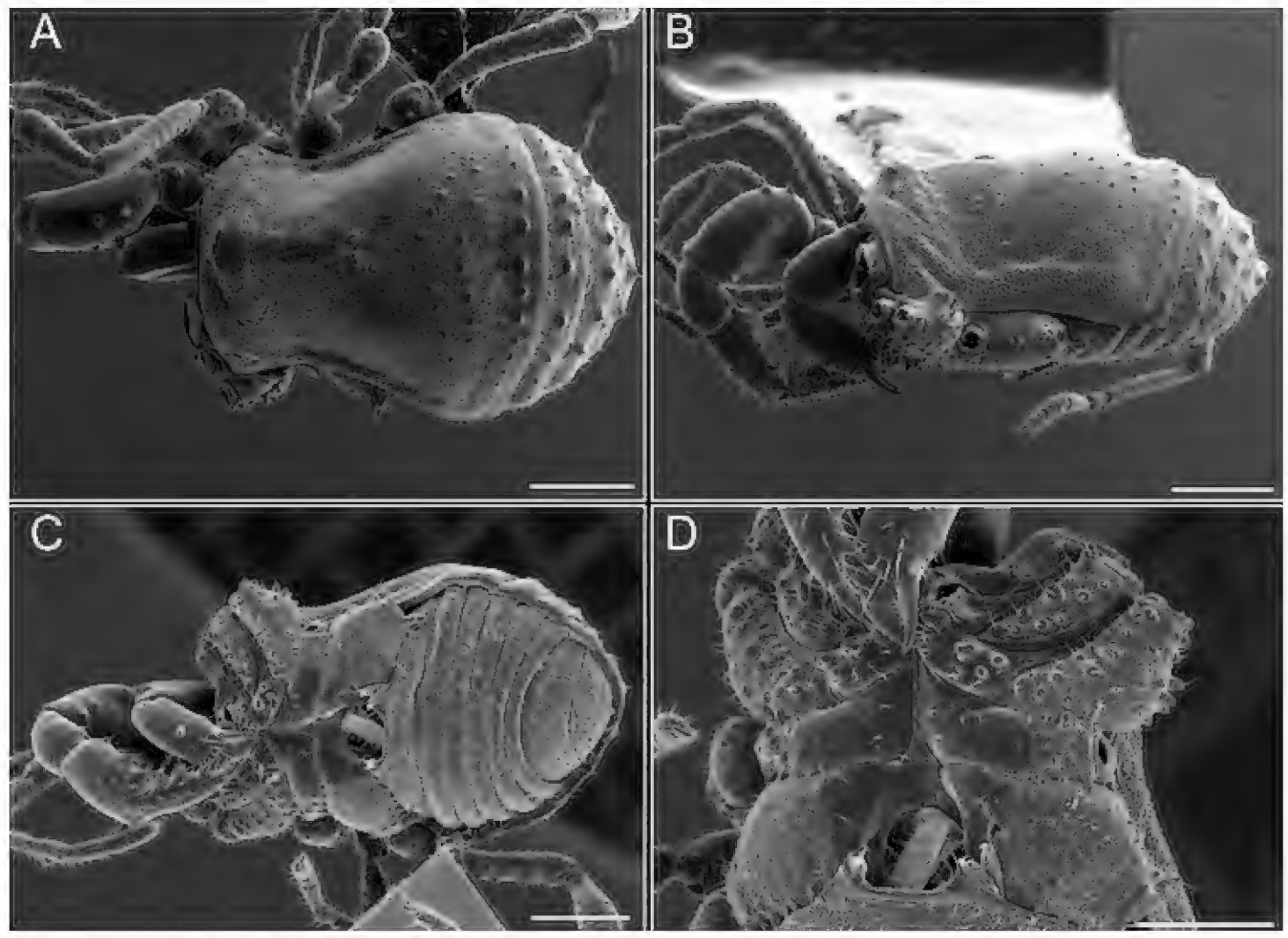

Figure 111. *Nerudiella jaimei* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 µm (**A, B, C**); 200 µm (**D**).

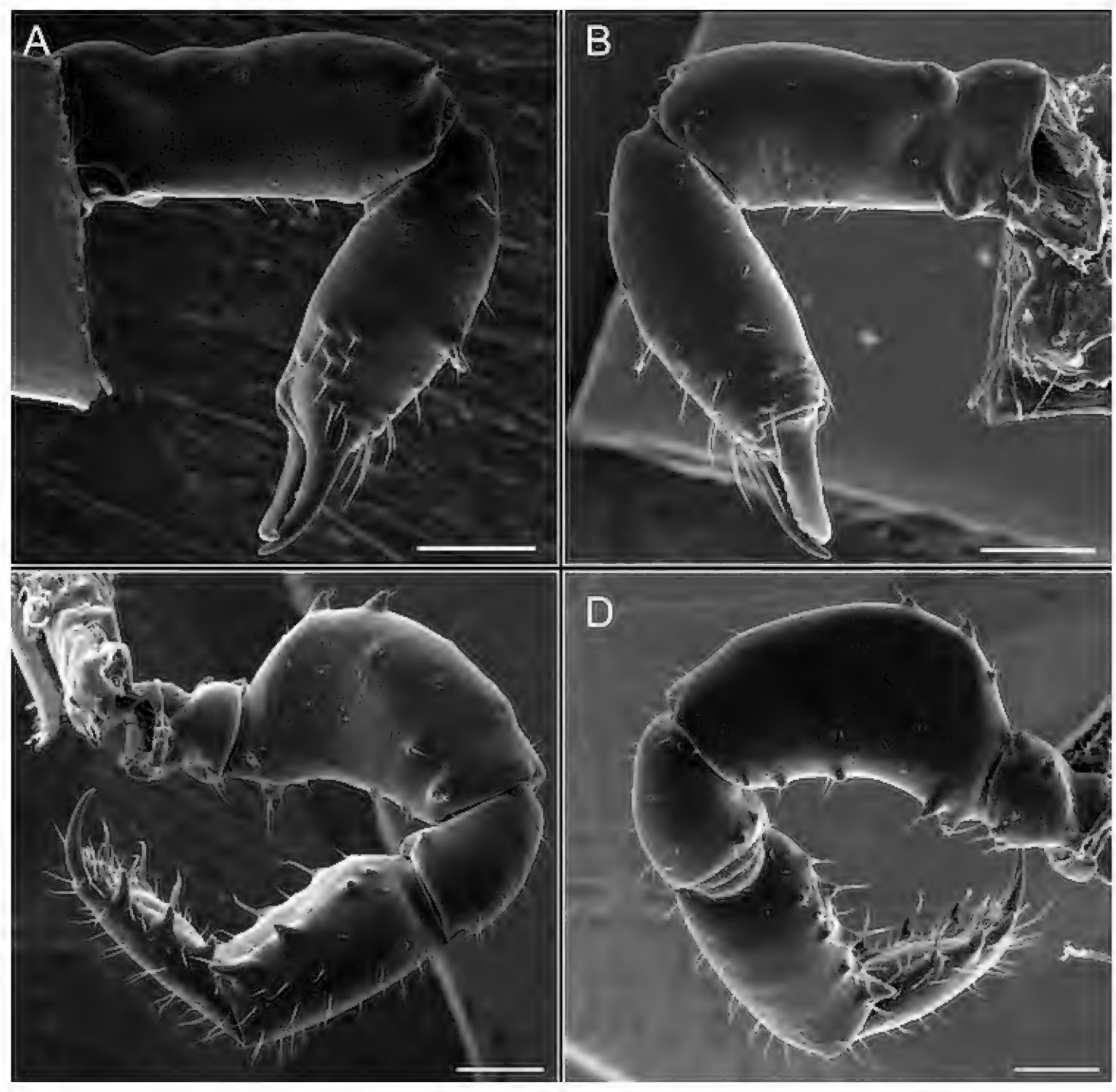

Figure 112. *Nerudiella jaimei* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm.

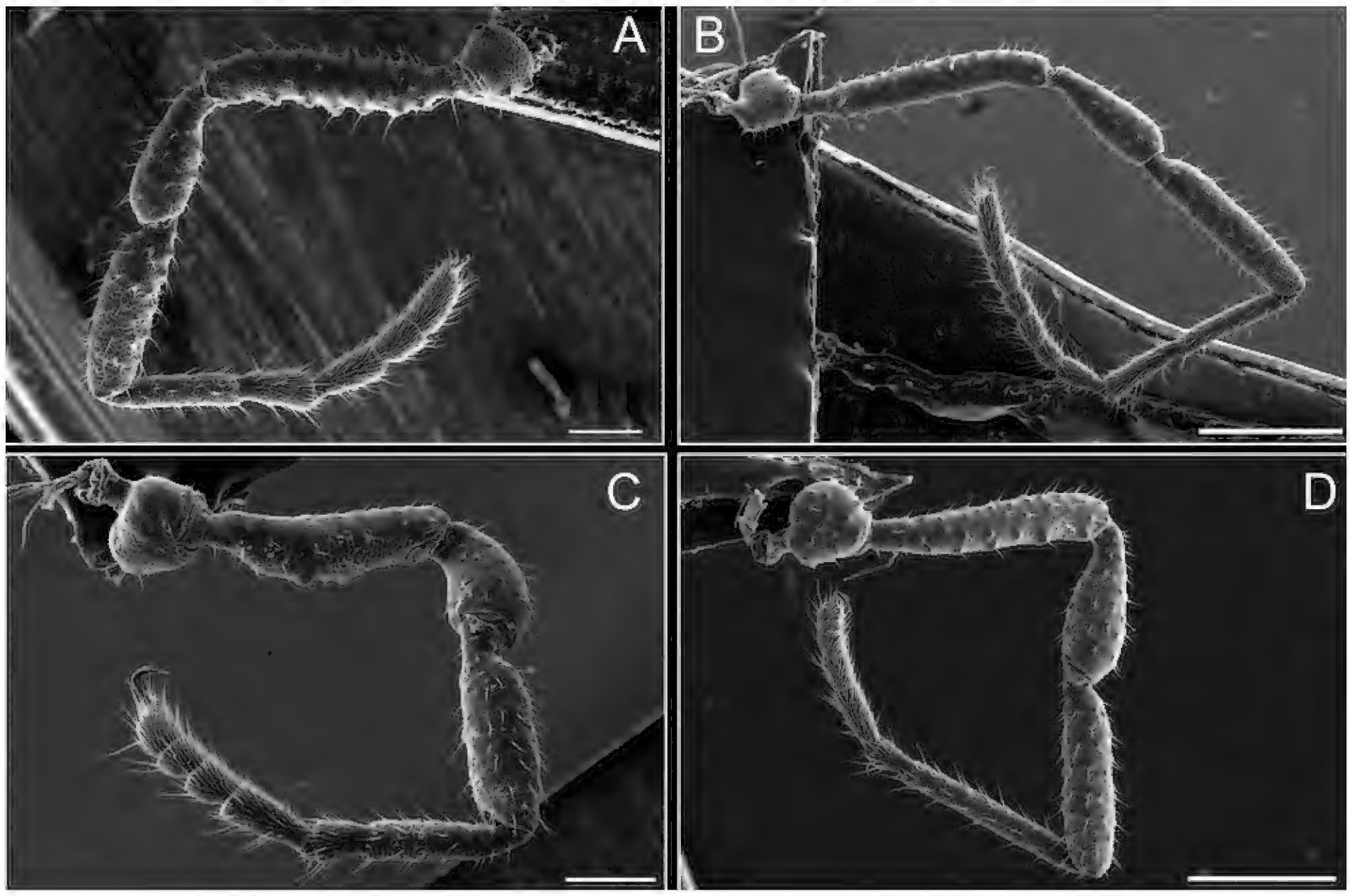

Figure 113. *Nerudiella jaimei* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

Chelicerae (Fig. 112A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II bearing sparse small setiferous tubercles, with one triangular tubercle prominent from the others in frontal view.

Pedipalps (Fig. 112C, D). Trochanter with two small dorsal and ventral tubercles. Femora bearing three dorsal spines with setae, five ventral-distal and two ventral-proximal. Patella with 2–3 small ventral setiferous tubercles. Tibia covered in small ventral tubercles, with two spines in the ventral-mesal area and three in the ventral-ectal areas. Tarsus with three mesal and ectal spines with subdistal setae in addition to setae and few granules.

Legs (Fig. 113). Coxa I with 9–10 setiferous tubercles (two distal tubercles stronger than the others), II with 12–13, III with six or seven, IV with four or five tubercles connected to the opisthosoma. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III and < ⅓ of IV. Leg zone II smooth with two or three small tubercles with subdistal setae on each side. Sternum arrow-shaped. Legs covered with small tubercles, astragalus longer than calcaneus in all legs, in leg II the calcaneus is slightly shorter than the astragalus. Tarsal count: 3–6–4–4.

Penis (Figs 114, 115). Pars distalis with a ventral plate bearing a thin cleft dividing the plate into two lamellae. Each lamella has three pointed macrosetae on the ventral surface and one short macroseta on the dorsal surface; capsula externa covering dorsal surface, with apical part folded dorsally, with a pair of long lateral processes; there is a dorsolateral plate attached to the pars basalis. Capsula externa shorter in length compared to the capsula interna. The capsula interna, on the other hand, is wide in shape, and it features a sharp apical area.

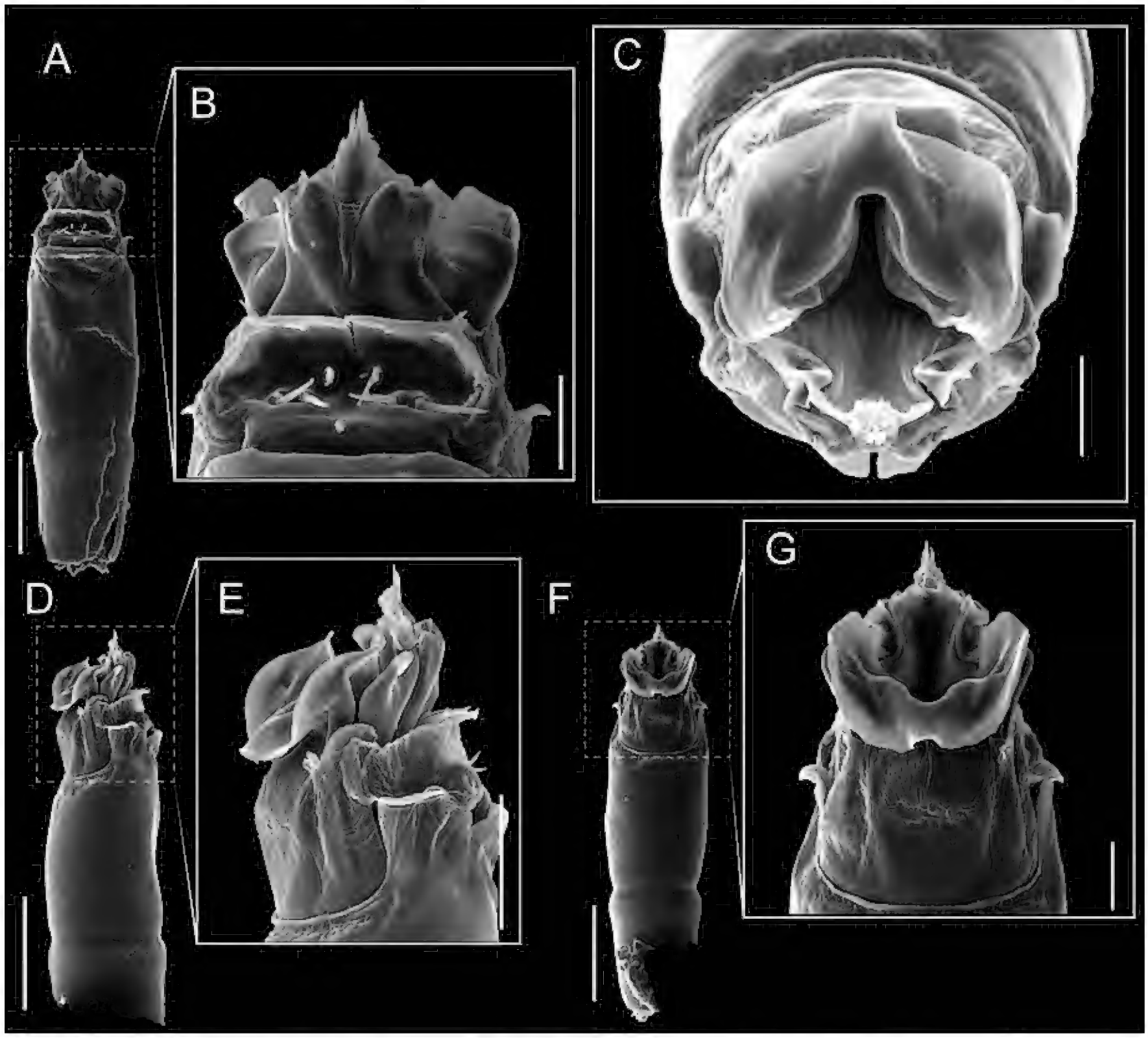

Figure 114. *Nerudiella jaimei* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, G**); 100 µm (**E**).

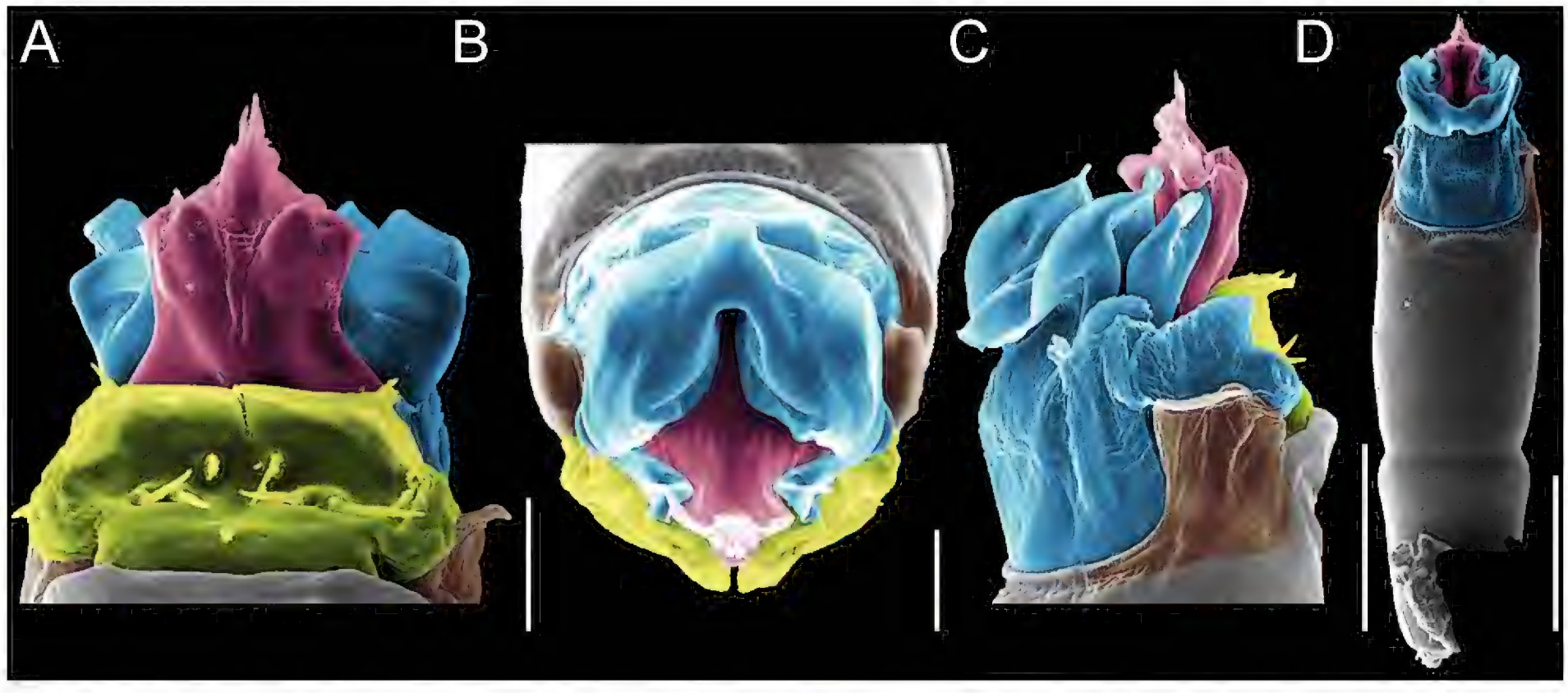

Figure 115. *Nerudiella jaimei* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 µm (**A, B**); 100 µm (**C**); 200 µm (**D**).

Female. Similar to males, with a shorter pedipalpal femora.

Female measurements. Total length 2.39, carapace length 1.1, dorsal scutum length 2.2, carapace max. width 1.57, mesotergum max. width 2.15. Appendage Measurements: Pedipalps. Trochanter length 0.23, femora length 0.77, patella length 0.50, tibia length 0.52, tarsus length 0.65. Leg I: trochanter (tr) 0.18, femora (fe) 0.72, patella (pa) 0.39, tibia (ti) 0.50, metatarsus (mt) 0.57, tarsus (ta) 0.47. II: tr 0.24, fe 0.90, pa 0.48, ti 0.71, mt 0.79, ta 0.87. III: tr 0.22, fe 0.56, pa 0.32, ti 0, 39, mt 0.49, ta 0.47. IV: tr 0.27, fe 0.81, pa 0.51, ti 0.70, mt 0.92, ta 0.59.

***Nerudiella malleco* sp. nov.**

https://zoobank.org/18A11F7E-3279-470D-898C-9CB9A84C5599

Figs 116–121

Material examined. ***Holotype*.** ♂ **Chile.** Malleco: Fundo Maria Esther, 15 km W from Victoria, E. Maury coll., 14.I.1989 (MNHNCL). ***Paratypes*. Chile.** Malleco: Fundo Maria Esther, 15 km W from Victoria, E. Maury coll., 14.I.1989, 2 ♂ (MACN), 08.I.1987 4 ♂ 1 ♀ 6 imm. (MACN), Monumento Natural Contulmo, E.M coll., 13. I.1989, 2 ♂ 3 ♀ (MACN), 15 km W Victoria, N. Platnick, O. Francke coll., 26.I.1985, 2 ♂ 3 ♀ 7 imm. (AMNH); Malalcahuello, E. Maury coll., 08. I.1987, 1 ♀ (MACN); 17 km E from Curacautín, N. Platnick, R. Schuh coll., 22.XI.1981, 1 ♂ 1 ♀ (AMNH), 1 imm. (AMNH), Monumento Natural Contulmo, E. Maury coll., 19.I.1991, 1 ♂ 4 ♀ (MACN). Same data, 1 imm. (AMNH).

Etymology. The specific epithet refers to the type locality of the species, the Malleco province, located in the Araucanía region of Chile. Noun in apposition.

Diagnosis. This species can be differentiated from other species within the genus by the distinct morphology of the male genitalia. Specifically, the male genitalia feature a robust and V-shaped process on the capsula externa when observed from a dorsal view.

Distribution. Chile: Bío-Bío and Araucanía Regions (Fig. 4F).

Description of male holotype. Measurements: Total length 4.1. Carapace length 1.1, Dorsal scutum length 2.3, Carapace max. width 1.21, Dorsal scutum max. width 1.6. Appendage measurements. Pedipalps. Trochanter length 0.26, femora length 0.98, patella length 0.47, tibia length 0.73, tarsus length 0.71. Leg I: trochanter (tr) 0.21, femora (fe) 0.82, patella (pa) 0.45, tibia (ti) 0.61, metatarsus (mt) 0.67, tarsus (ta) 0.61. II: tr 0.22, fe 1.05, pa 0.53, ti 0.73, mt 0.87, ta 1.03. III: tr 0.22, fe 0.74, pa 0.33, ti 0.55, mt 0.83, ta 0.67. IV: tr 0.25, fe 1.08, pa 0.61, ti 0.83, mt 1.12, ta 0.76.

Dorsum (Fig. 116, 117). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded. The dorsal scutum microgranulate. Mesotergal areas on the dorsal scutum do not have a clear separation but are covered in small setiferous tubercles. Additionally, the free tergites of the species bear a row of small setiferous tubercles.

Chelicerae (Fig. 118A, B). Segment I with an acute tubercle on the dorso-distal surface. Segment II bearing scattered setae in ectal and ventral views, with one triangular tubercle being more prominent than the others in front view.

Pedipalps (Fig. 118C, D). Trochanter with a small dorsal and ventral tubercle. Femora with three dorsoproximal setiferous spines, four small ventral-distal

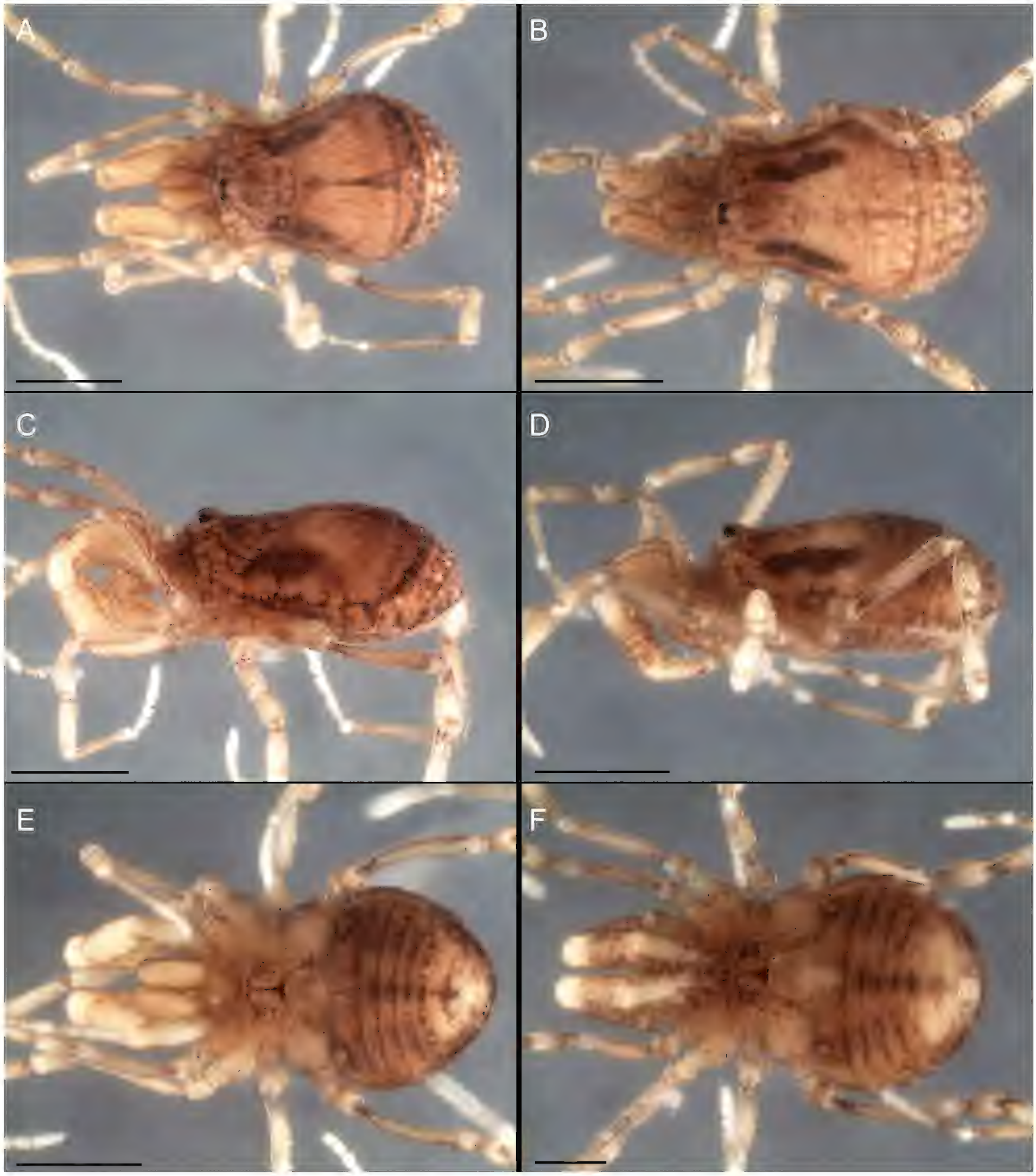

Figure 116. *Nerudiella malleco* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

tubercles, and two ventral-proximal spines. Tibia with three ventral-ectal and two ventral-mesal spines. Tarsus with three mesal and ectal spines, accompanied by subdistal setae.

Legs (Fig. 119). Coxa I with nine or ten setiferous tubercles, II with 18–20 setiferous tubercles, IV with seven or eight small tubercles connected to the opisthosoma. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III and < ⅓ of IV. Smooth area of leg II with two small tubercles with

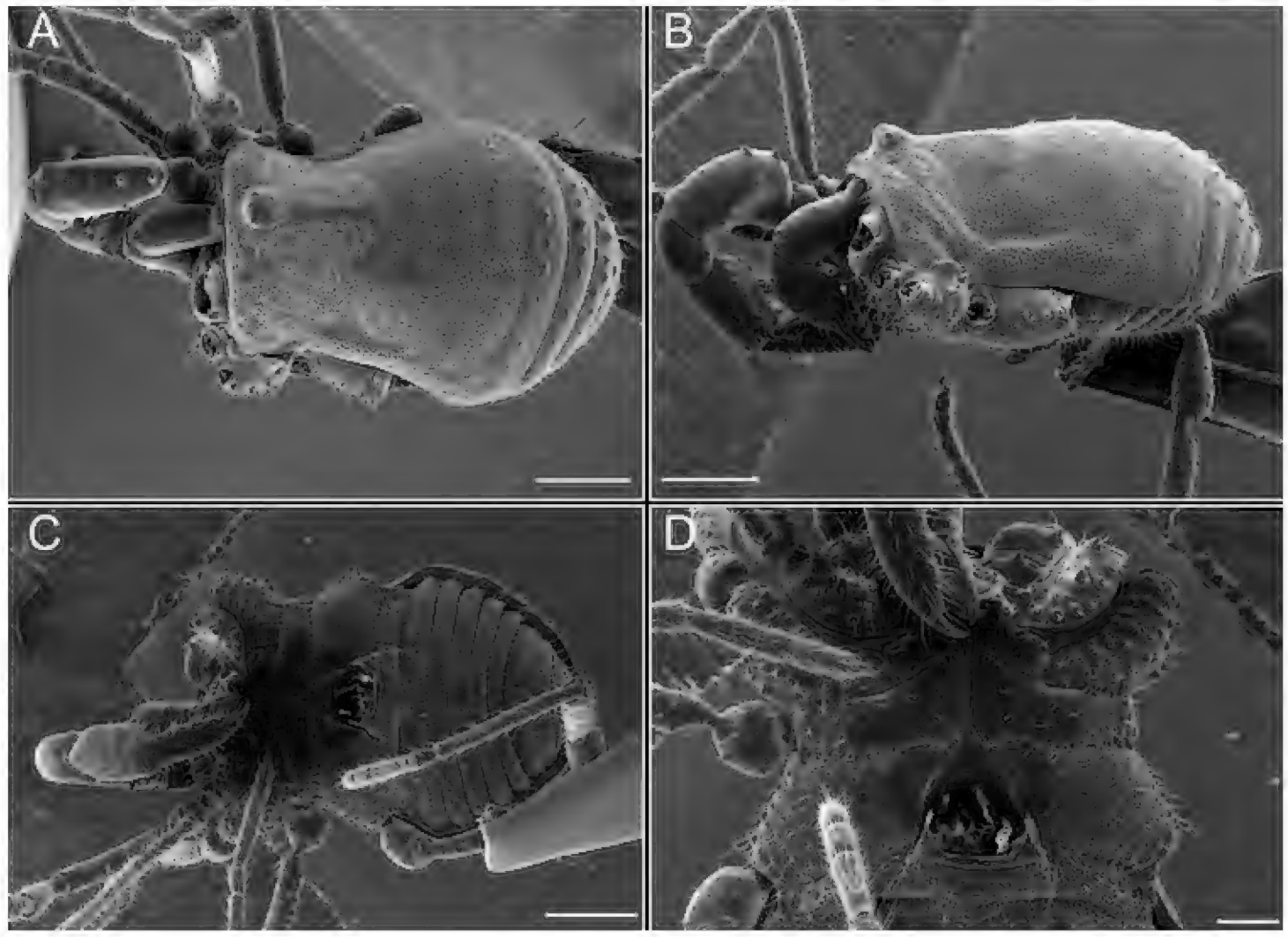

Figure 117. *Nerudiella malleco* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 200 μm (**D**).

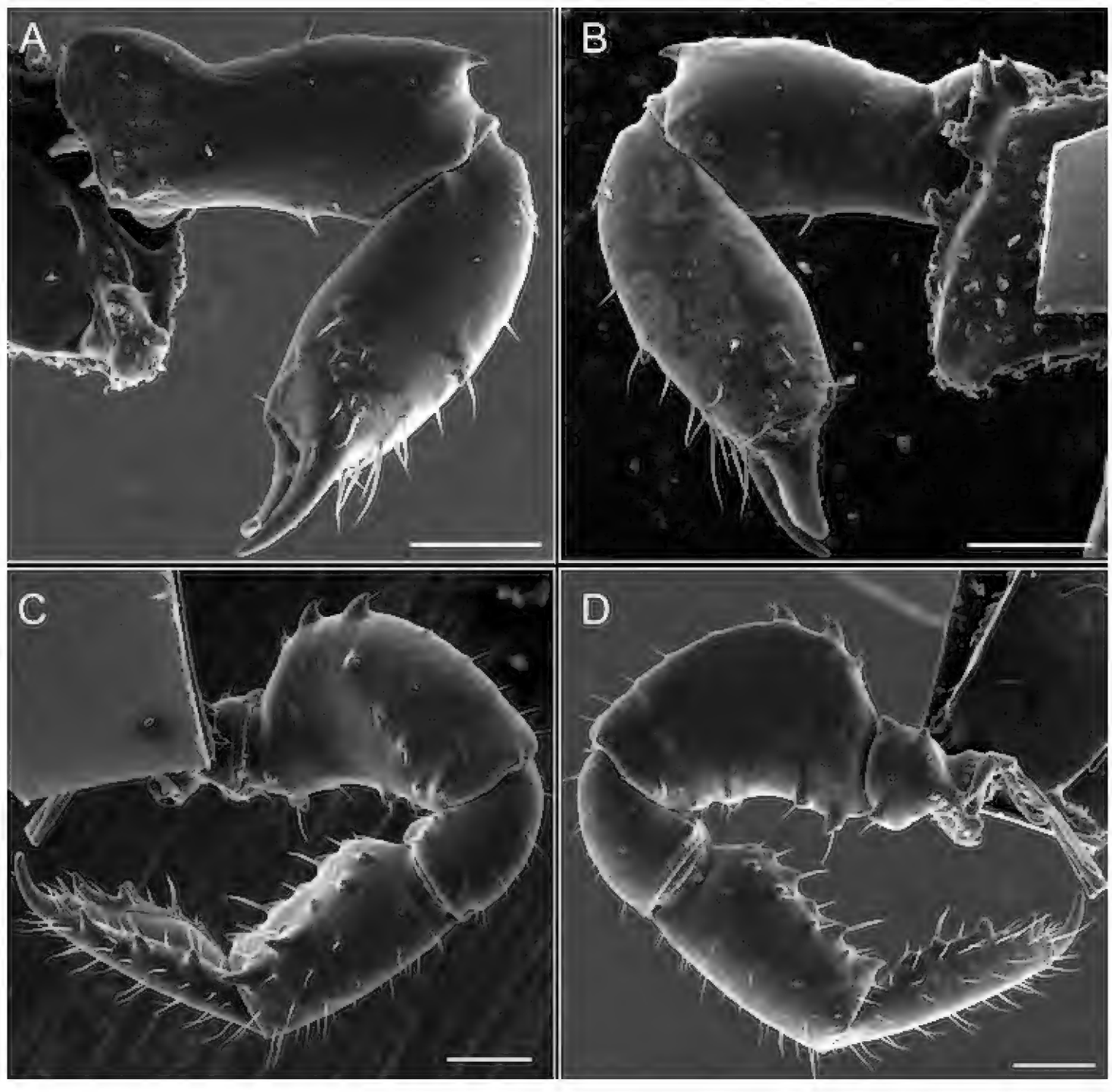

Figure 118. *Nerudiella malleco* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

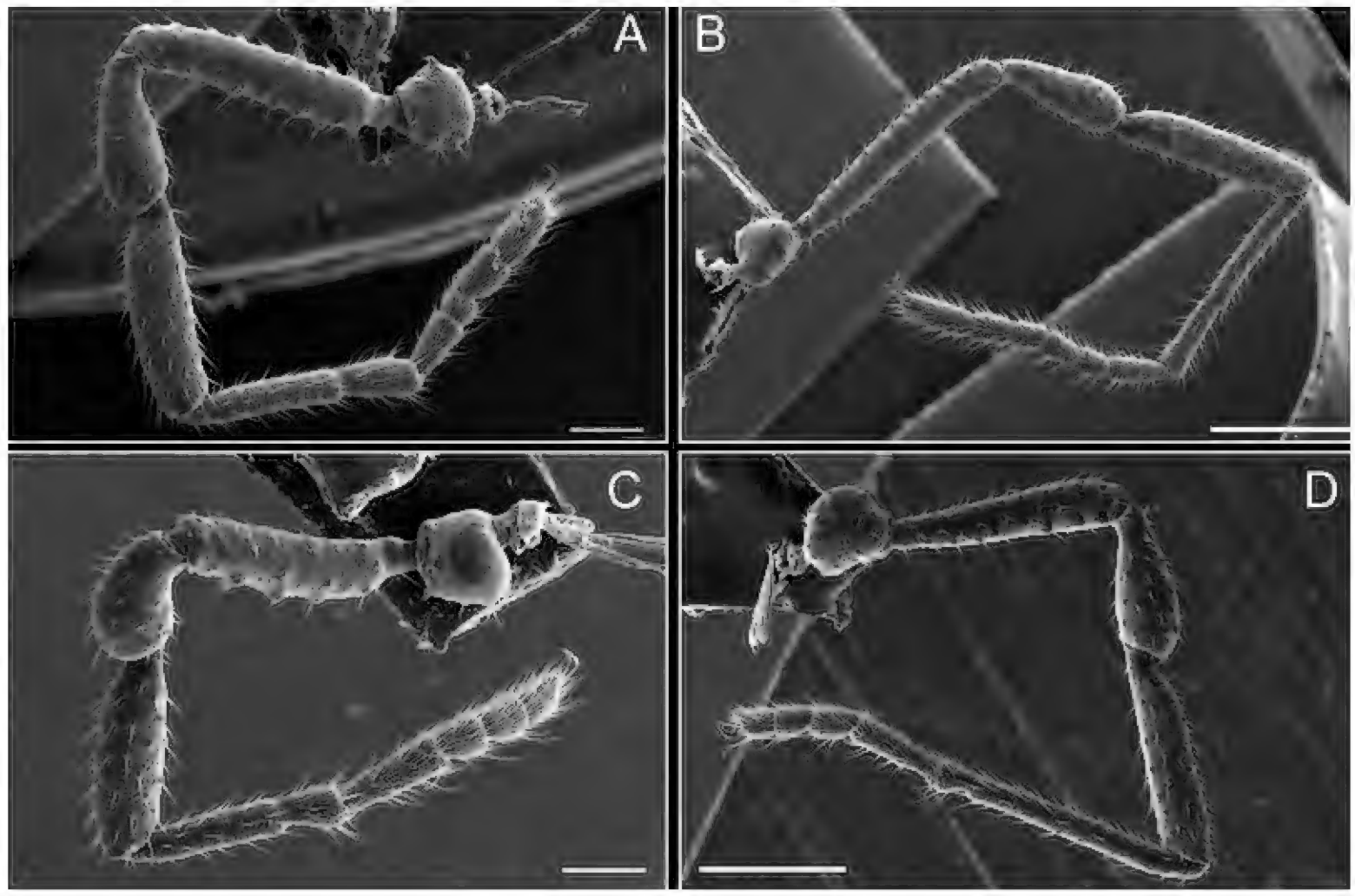

Figure 119. *Nerudiella malleco* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm (**A, C**); 500 µm (**B, D**).

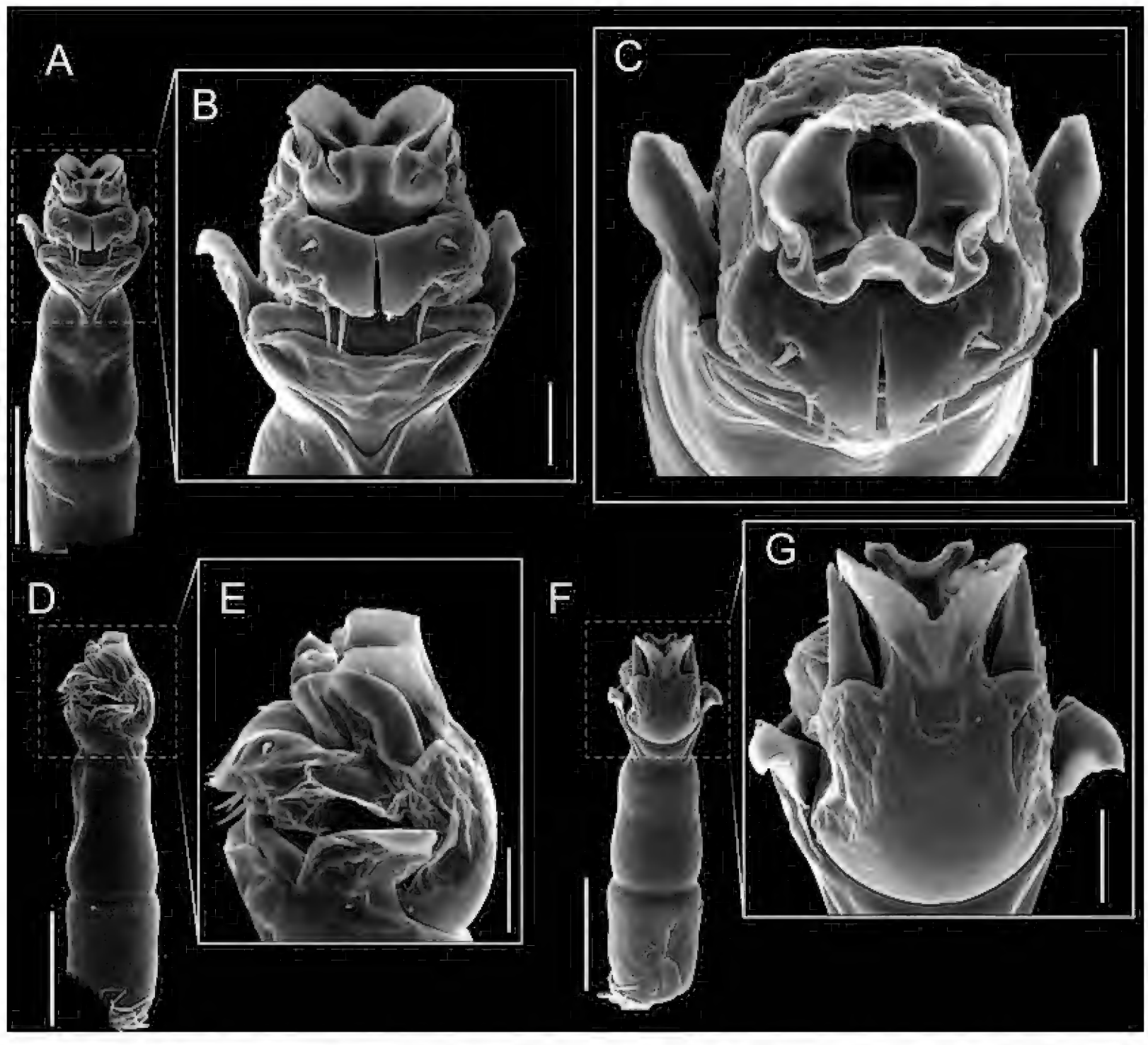

Figure 120. *Nerudiella malleco* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, E, G**).

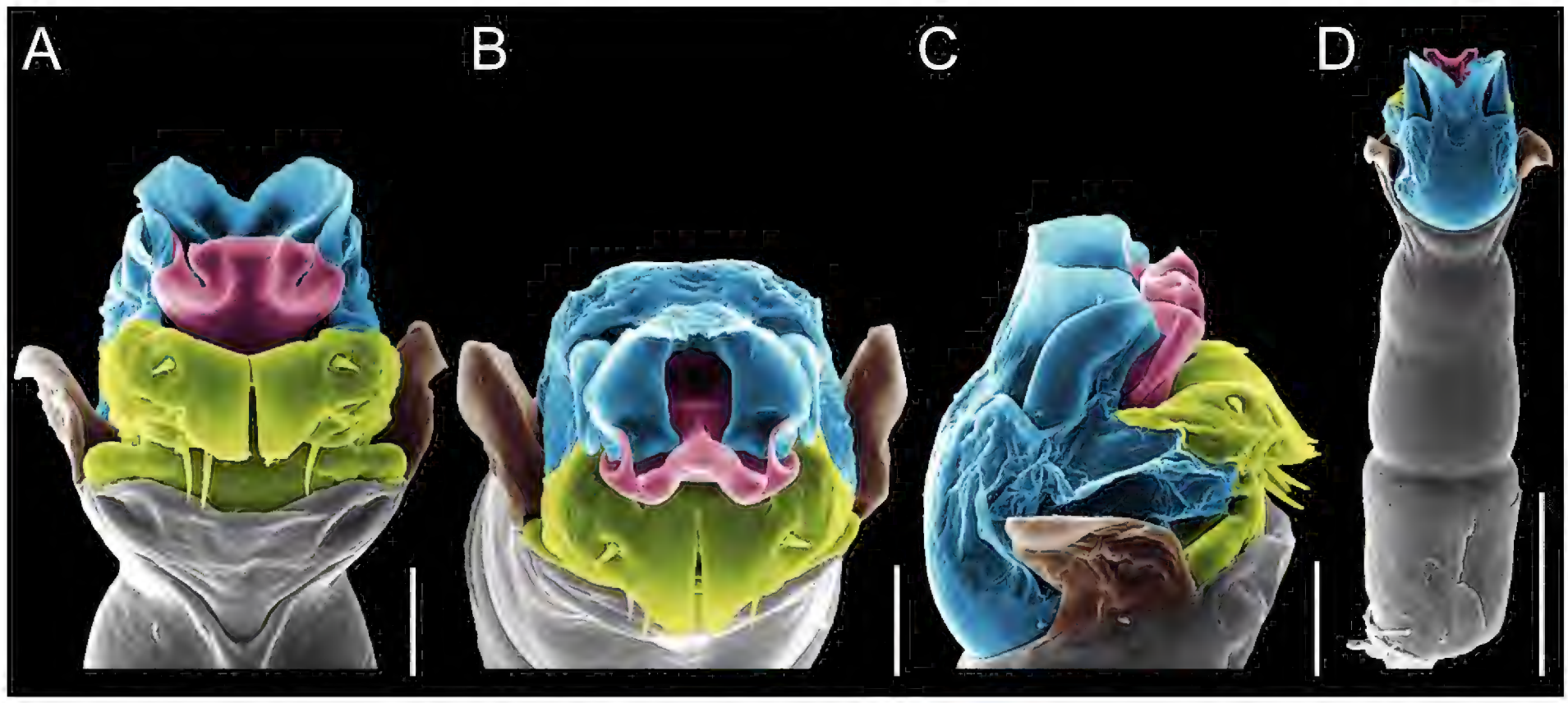

Figure 121. *Nerudiella malleco* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm (**A–C**); 200 μm (**D**).

subdistal setae on each side. Sternum arrow-shaped. Legs covered with small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 3–6–4–4.

Penis (Figs 120, 121). Pars distalis with a ventral plate bearing a fine cleft dividing the plate into two lamellae. Each lamella has three pointed macrosetae on the ventral surface and one small macroseta on the dorsal surface; capsula externa covering dorsal surface, apical area of capsula externa with a V-shaped notch and a pair of lateral processes; there is a dorsolateral plate connected to the pars basalis; dorsolateral plate present. Capsula interna short, with two slits in ventral view, without visible stylus.

Female. Females similar to males, with shorter pedipalpal femora.

Female measurements. Total length 4.07, carapace length 1.16, dorsal scutum length 2.71, carapace max. width 1.41, mesotergum max. width 1.96. Appendage measurements: Pedipalps. Trochanter length 0.26, length of the femora 0.95, length of the patella 0.47, length of the tibia 0.73, length of the tarsus 0.74. Leg I: trochanter (tr) 0.28, femora (fe) 0.98, patella (pa) 0.55, tibia (ti) 0.77, metatarsus (mt) 0.85, tarsus (ta) 0.77. II: tr 0.31, fe 1.27, pa 0.68, ti 1.06, mt 1.17, ta 1.34. III: tr 0.30, fe 0.90, pa 0.41, ti 0.61, mt 0.72, ta 0.76. IV: tr 0.37, fe 1.28, pa 0.70, ti 0.99, mt 1.22, ta 0.92.

Nerudiella penco sp. nov.

https://zoobank.org/F00EE6F1-AC0A-4EBE-A71F-D5A7AC8DDD35

Figs 122–127

Material examined. ***Holotype*.** ♂ **Chile.** Concepción: Estero Nonguén, N. Platnick, R. Schuh coll., 16.XI.1981 (AMNH). ***Paratypes*. Chile.** Concepción: Penco, T. Cekalovic coll., 11.II.1979, 1 ♀ (AMNH).

Etymology. The specific epithet refers to the type locality of the species, the commune of Penco, located in the province of Concepción, Chile. Noun in apposition.

Figure 122. *Nerudiella penco* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

Diagnosis. This species can be distinguished from the other species in the genus by having the dorsal scutum without tubercles. The male genitalia has longer macrosetae than other species of the genus, capsula externa divided into two halves that touch in the apical portion, leaving a gap between the two halves.

Distribution. Chile: Bío-Bío Region (Fig. 4F).

Description of male holotype. Measurements: Total length 3.67. Carapace length 0.97, dorsal scutum length 1.90, carapace max. width 1.26, mesotergum

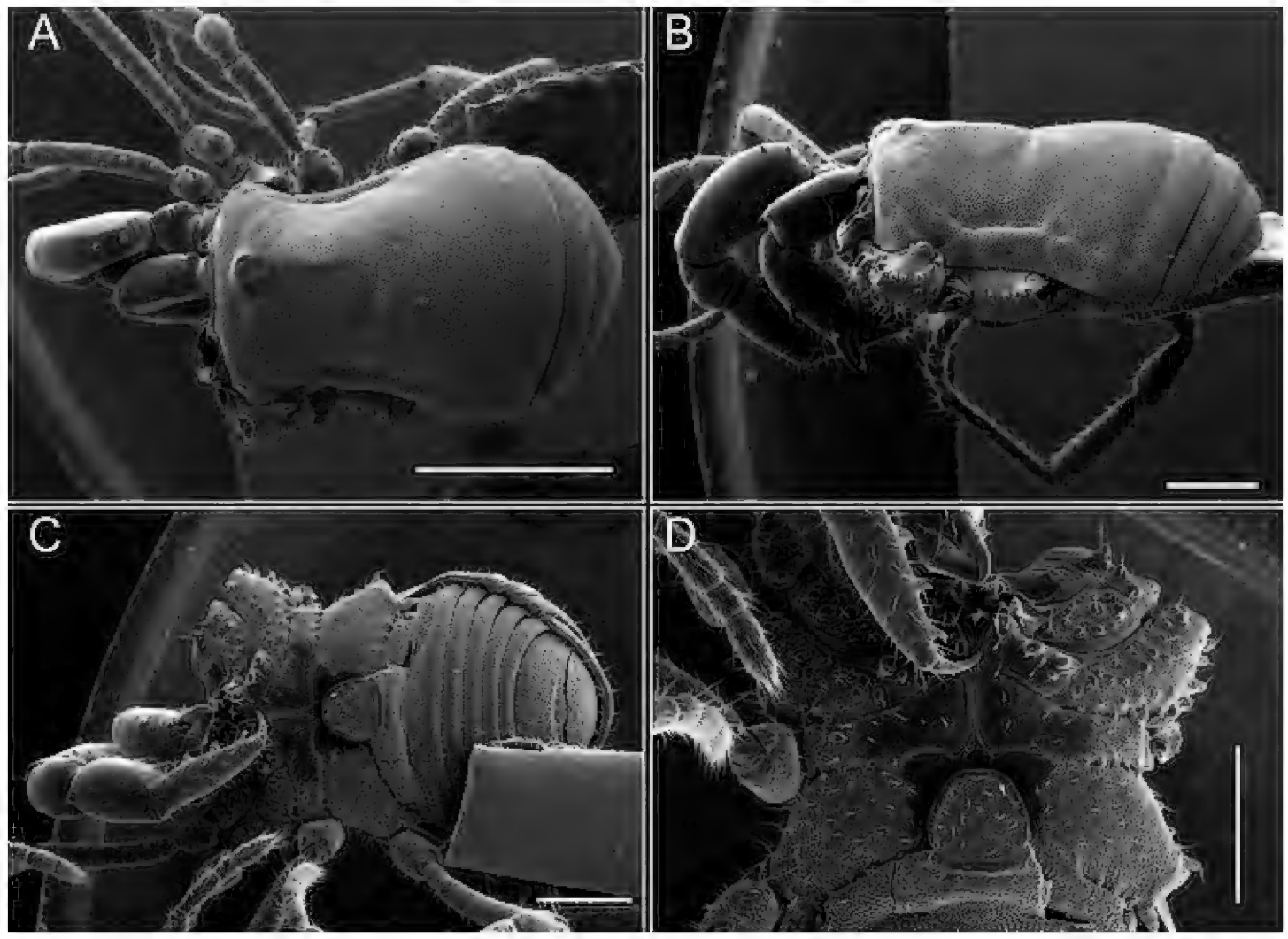

Figure 123. *Nerudiella penco* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

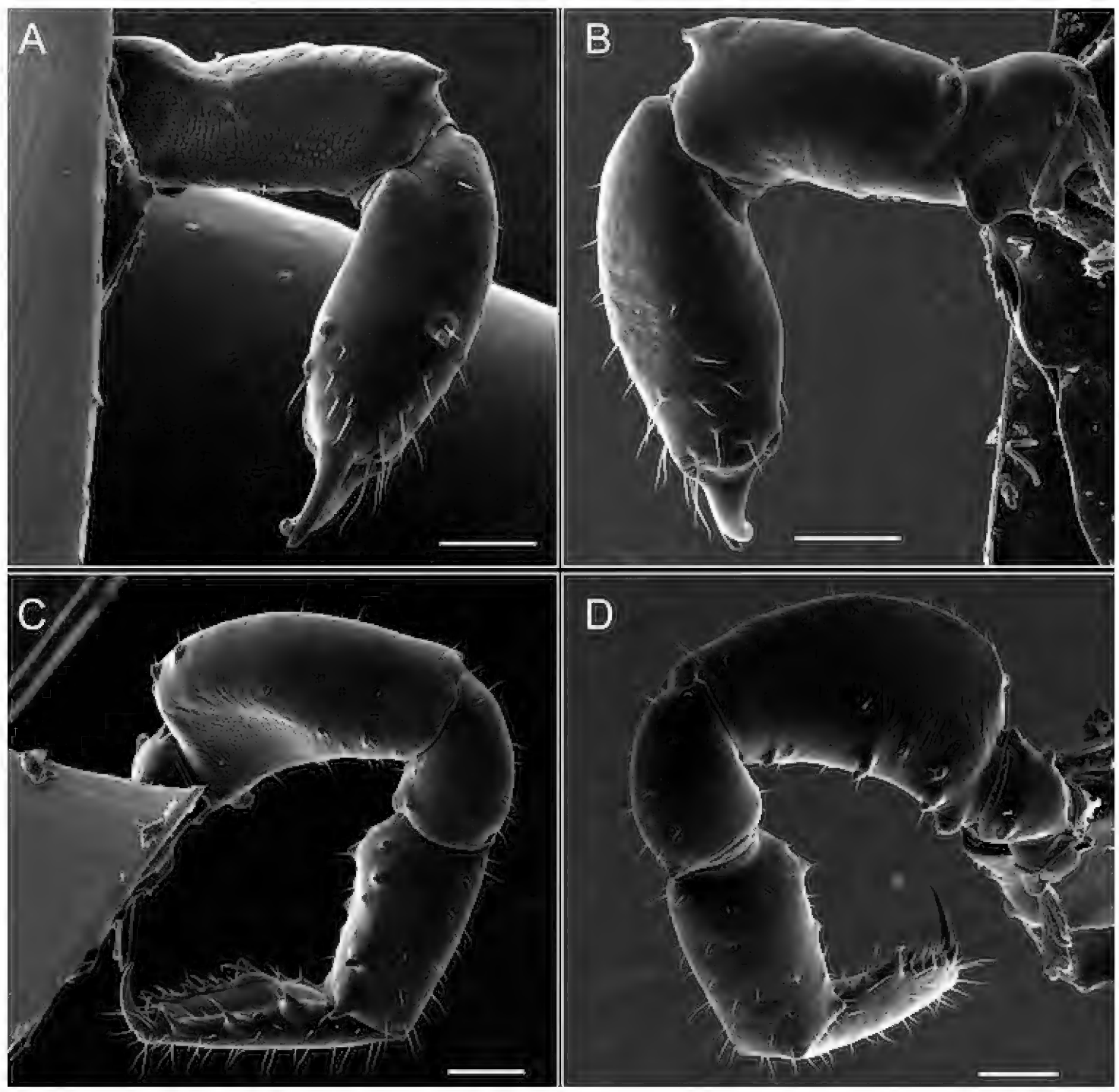

Figure 124. *Nerudiella penco* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

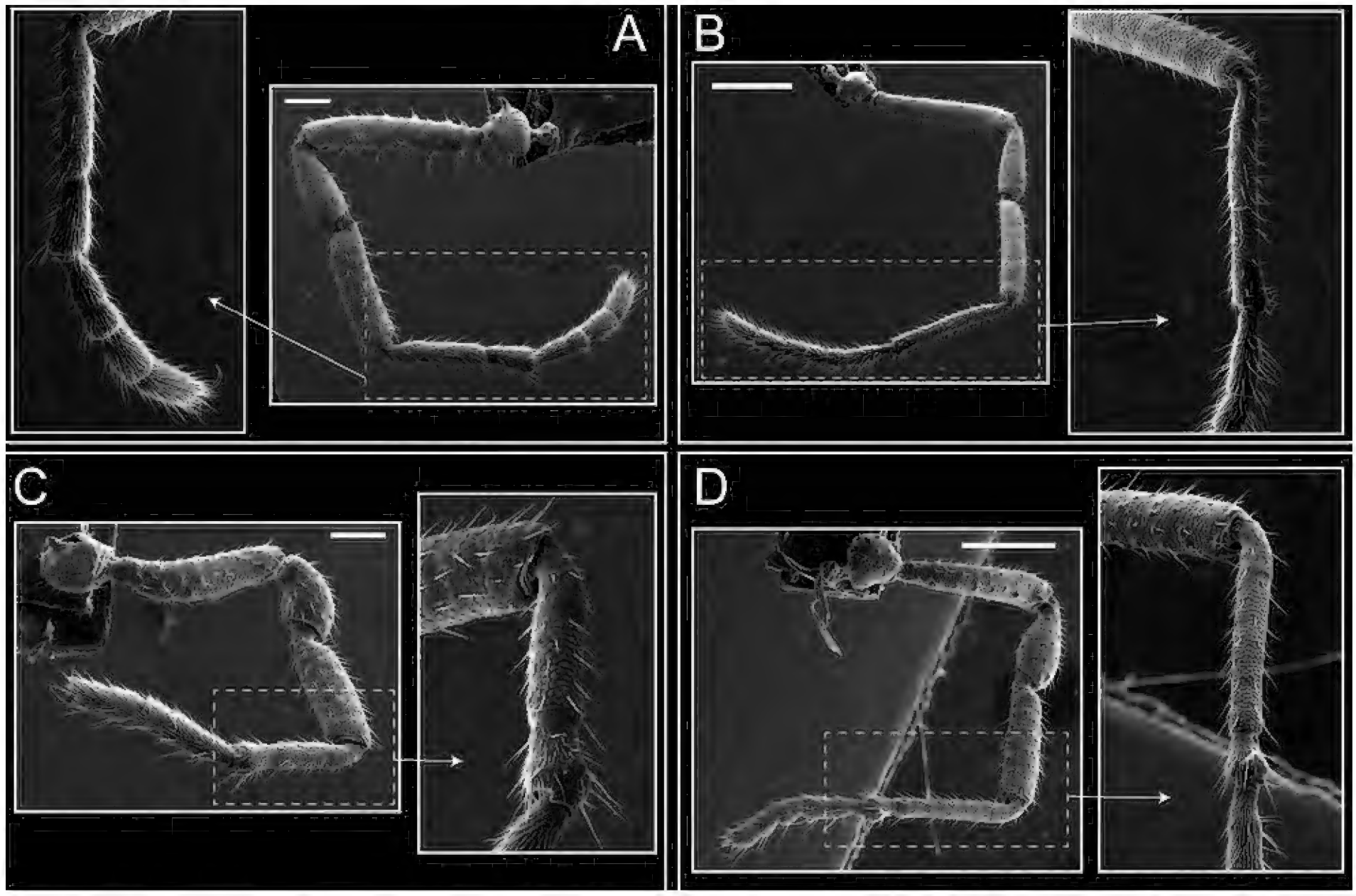

Figure 125. *Nerudiella penco* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

max. width 1.55. Appendage measurements: Pedipalps. Trochanter length 0.24, femora length 0.98, patella length 0.53, tibia length 0.70, tarsus length 0.71. Leg I: trochanter (tr) 0.19, femora (fe) 0.85, patella (pa) 0.46, tibia (ti) 0.60, metatarsus (mt) 0.70, tarsus (ta) 0.63. II: tr 0.25, fe 1.17, pa 0.56, ti 0.83, mt 0.99, ta 1.27. III: tr 0.26, fe 0.77, pa 0.32, ti 0.55, mt 0.57, ta 0.71. IV: tr 0.30, fe 1.07, pa 0.55, ti 0.85, mt 1.04, ta 0.89.

Dorsum (Fig. 122, 123). Eta (η) hourglass-shaped dorsal scutum. Ocularium low. Dorsal scutum microgranulate, without clear delimitation of areas. Areas III–IV smooth, with few setae; posterior margin with a row of setae. Free terg-ites have a row of setae.

Chelicerae (Fig. 124A, B). Segment I with a small tubercle on the dorsal-distal surface. Segment II with a mesal tubercle and bearing few setae.

Pedipalps (Fig. 124C, D). Trochanter with a small dorsal and ectal tubercle. Femora with a row of three spines and one setiferous granule on the ventral surface, three small dorsal spines with subdistal setae, and three meso-distal setiferous granules. Patella with 1–2 ventral setiferous granules. Tibia with three ectal and mesal spines with subdistal setae; presence of scant granules in ventral view. Tarsus with an ectal row of two subdistal setiferous spines and 6–8 small setiferous tubercles, there are three spines with subdistal setae on the mesal surface.

Legs (Fig. 125). Coxae I and II covered in setiferous tubercles, III and IV only with the microgranulation, bearing three bridges between legs II and III, five or six between III and IV, four between leg IV and the opisthosoma (the longest being the most distal). Spiracles not obstructed by bridges. Smooth

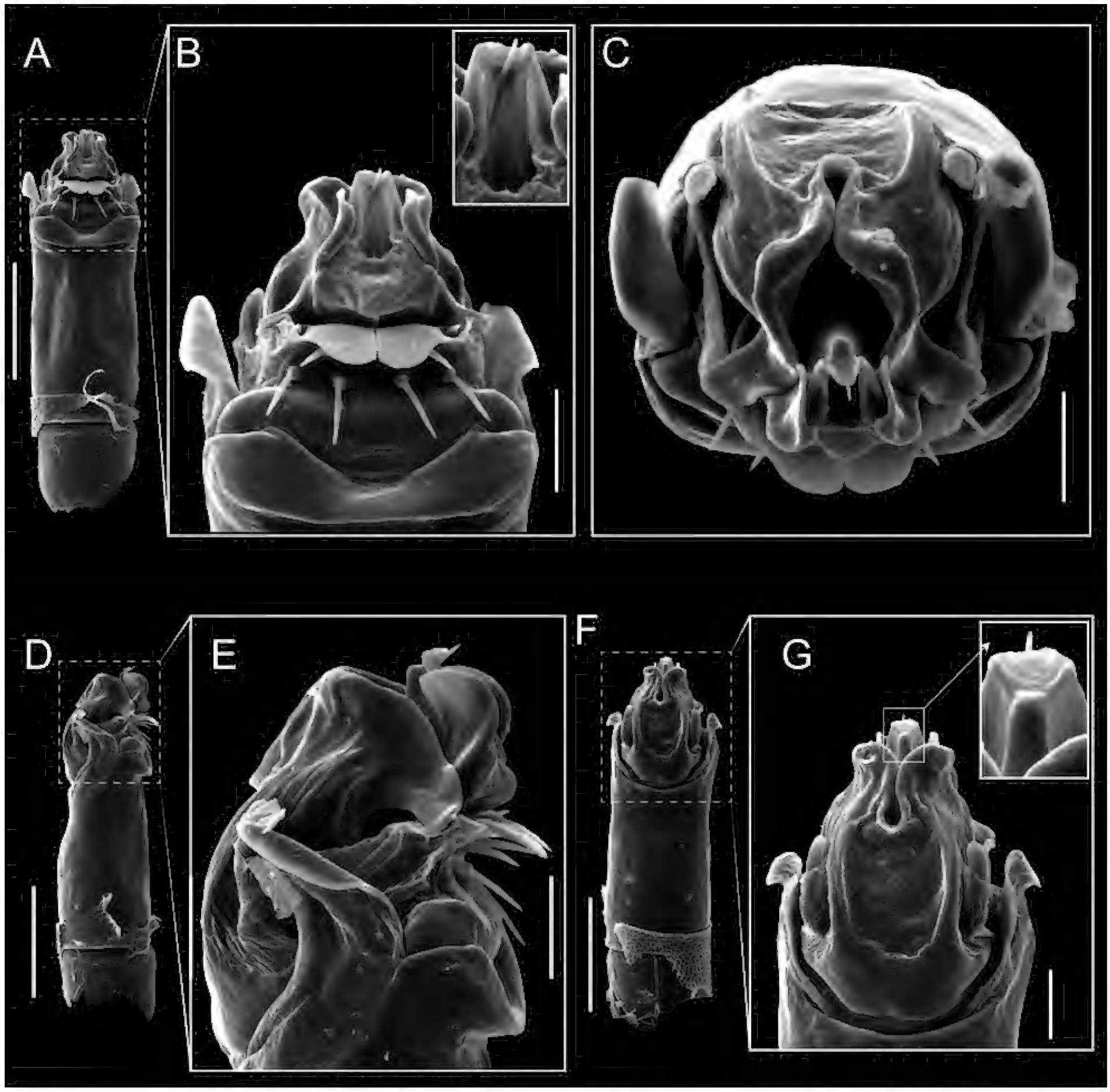

Figure 126. *Nerudiella penco* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 50 µm (**B, C, E, G**).

area occupying ⅓ of leg II (with two small tubercles and two rounded tubercles), ⅔ of III and < ⅓ of IV. Sternum arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 3–6–4–4.

Penis (Figs 126, 127). Pars distalis with a large ventral plate bearing a cleft that divides the plate into two lamellae. Each lamella has three long pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; capsula externa covering dorsal and lateral surfaces, having a cleft dividing the capsula externa into two halves; there is a dorsolateral plate attached to the pars basalis. Capsula interna longer than the capsula externa, partially covering the ventral plate, with a visible stylus in its apical portion.

Female. Similar to males, with shorter pedipalpal femora.

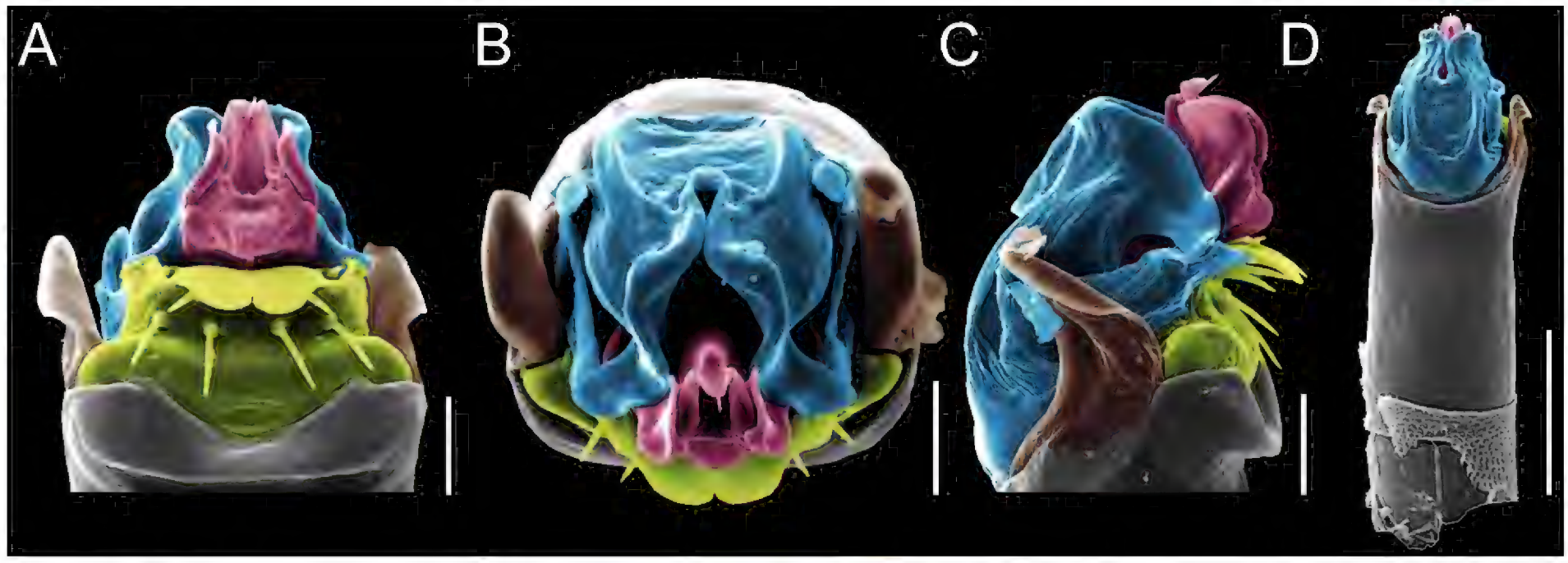

Figure 127. *Nerudiella penco* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 μm.

Female measurements. Total length 4.06, carapace length 1.12, dorsal scutum length 2.16, carapace max. width 1.46, mesotergum max. width 2.04. Appendage Measurements: Pedipalps. Trochanter length 0.27, femora length 0.97, patella length 0.51, tibia length 0.68, tarsus length 0.82. Leg I: trochanter (tr) 0.27, femora (fe) 0.99, patella (pa) 0.50, tibia (ti) 0.73, metatarsus (mt) 0.81, tarsus (ta) 0.73. II: tr 0.30, fe 1.15, pa 0.65, ti 0.82, mt 1.00, ta 1.00. III: tr 0.24, fe 0.81, pa 0.45, ti 0.60, mt 0.68, ta 0.77. IV: tr 0.36, fe 1.24, pa 0.69, ti 1.04, mt 1.26, ta 1.20.

***Nerudiella pichi* sp. nov.**

https://zoobank.org/7727BE05-A618-4D2A-A79C-291D73318A6D

Figs 128–133

Material examined. ***Holotype*.** ♂ **Chile.** Choapa: Pichidangui, Valparaíso, Cerro La Silla del Gobernador, E. Maury coll. 30.X.1988 (MNHNCL). ***Paratypes*. Chile.** Choapa: Pichidangui, Valparaíso, Quebrada near Puente Totoralillo, 13.XI.1987, E. Maury coll. 1 ♂ (MACN). Los Vilos, Cuesta Caviolén, E. Maury, 12.XI.1987 1 ♂ 2 ♀ (MACN). Valparaíso, 10 km S de Casablanca, E. Maury, 13.I.1984 2 ♀ (MACN). Pichidangui, Valparaíso, Quebrada near Puente Totoralillo, E. Maury coll. 13.XI.1987, 7 ♂ 1 ♀ (MACN). Valparaíso: Quebrada El Tigre 25 km E Zapallar, M. Ramírez, J. Pizarro coll., 12.II.2011, 1 ♀ (MACN).

Etymology. The specific epithet refers to "Pichí" which comes from Mapudungun, the language of the Mapuche (original people of the region), meaning small. Noun in apposition.

Diagnosis. This species can be distinguished from the other species of the genus by having the dorsal microgranulate; Femora and tibia of the pedipalp with small tubercles. The male genitalia have a reduced ventral plate, a very long capsula interna and capsula externa, as well as a long fine structure at the apex of the capsula interna.

Distribution. Chile: Valparaíso Region.

Description of male holotype. Measurements: Total length 2.65, carapace length 1.12, dorsal scutum length 2.21, carapace max. width 1.64, mesotergum

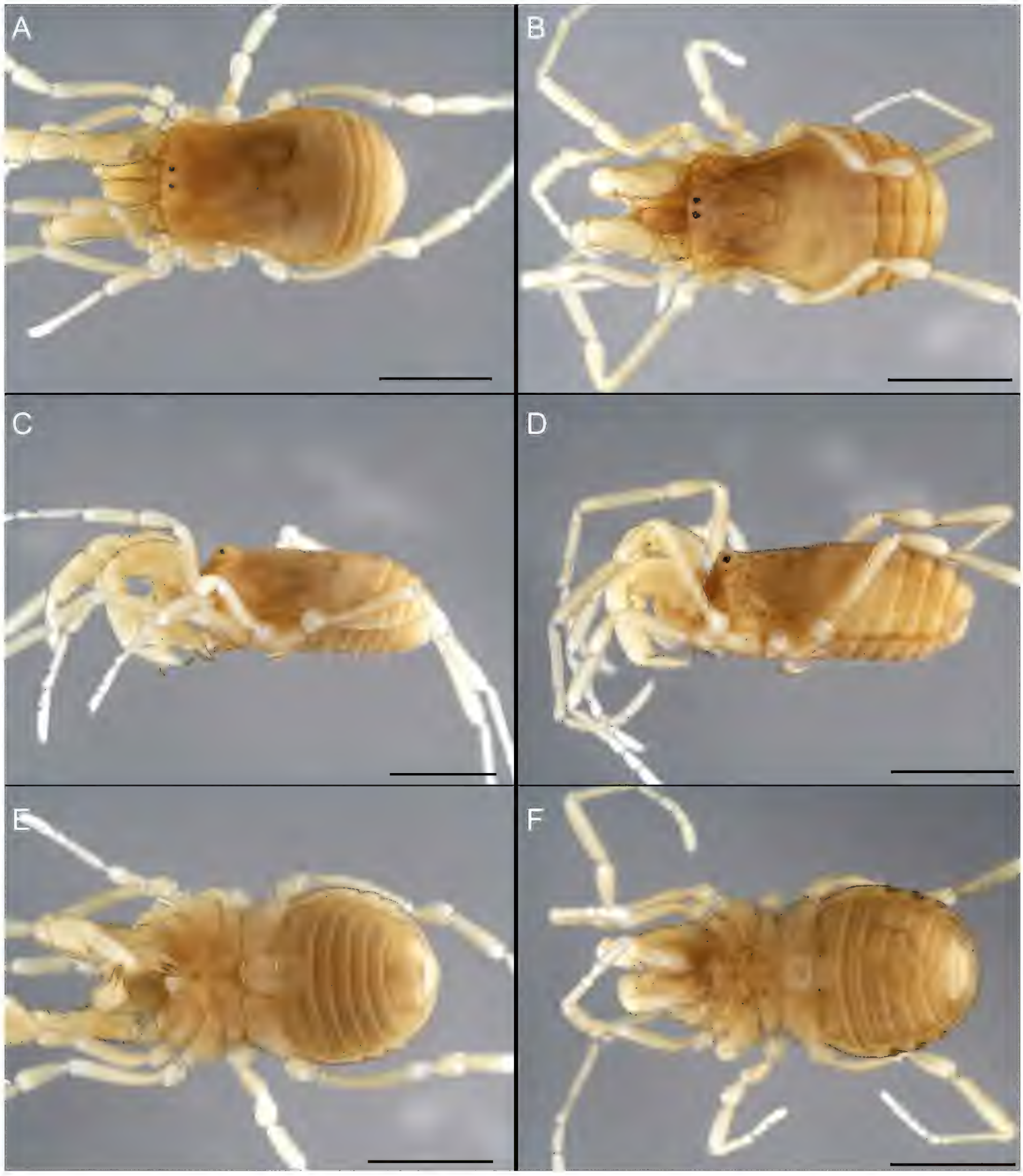

Figure 128. *Nerudiella pichi* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm.

max. width 2.02. Appendage measurements: Pedipalps. Trochanter length 0.28, femora length 1.12, patella length 0.73, tibia length 0.77, tarsus length 0.80. Leg I: trochanter (tr) 0.20, femora (fe) 1.00, patella (pa) 0.52, tibia (ti) 0.73, metatarsus (mt) 0.90, tarsus (ta) 0.77. II: tr 0.27, fe 1.37, pa 0.63, ti 1.03, mt 1.14, ta 1.36. III: tr 0.27, fe 0.87, pa 0.40, ti 0.71, mt 0.90, ta 0.76. IV: tr 0.35, fe 1.29, pa 0.65, ti 1.05, mt 1.32, ta 0.86.

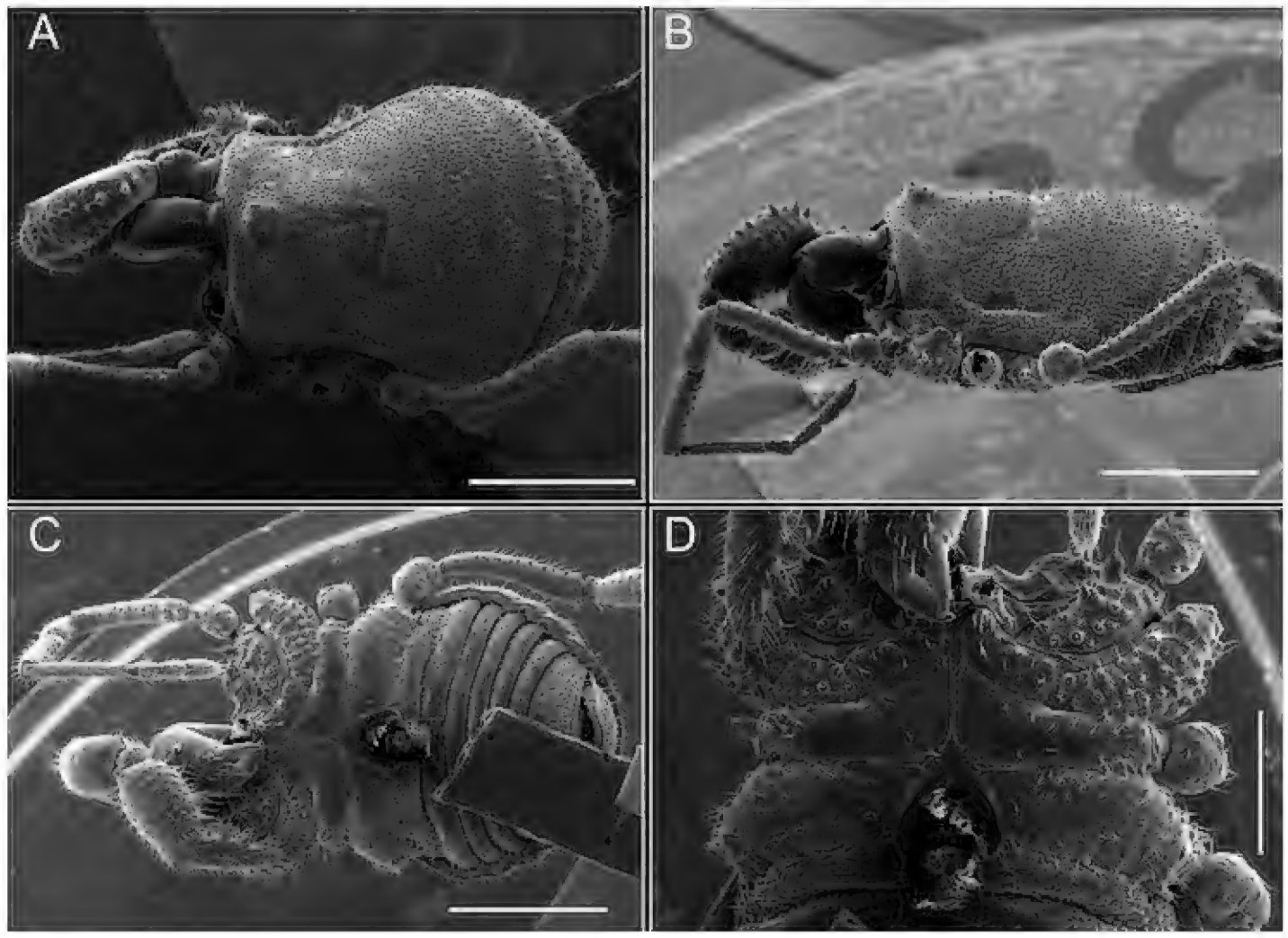

Figure 129. *Nerudiella pichi* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm.

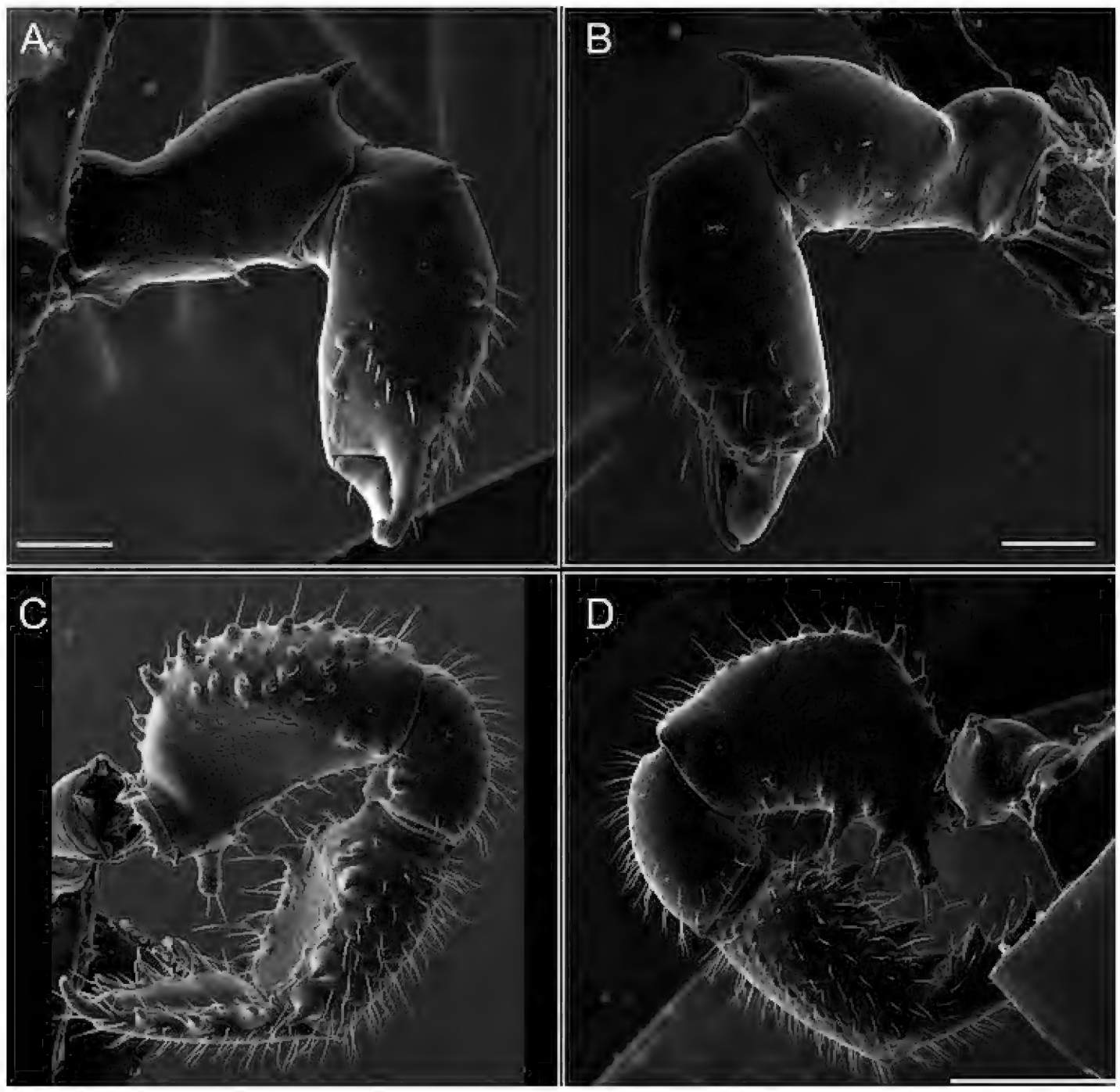

Figure 130. *Nerudiella pichi* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

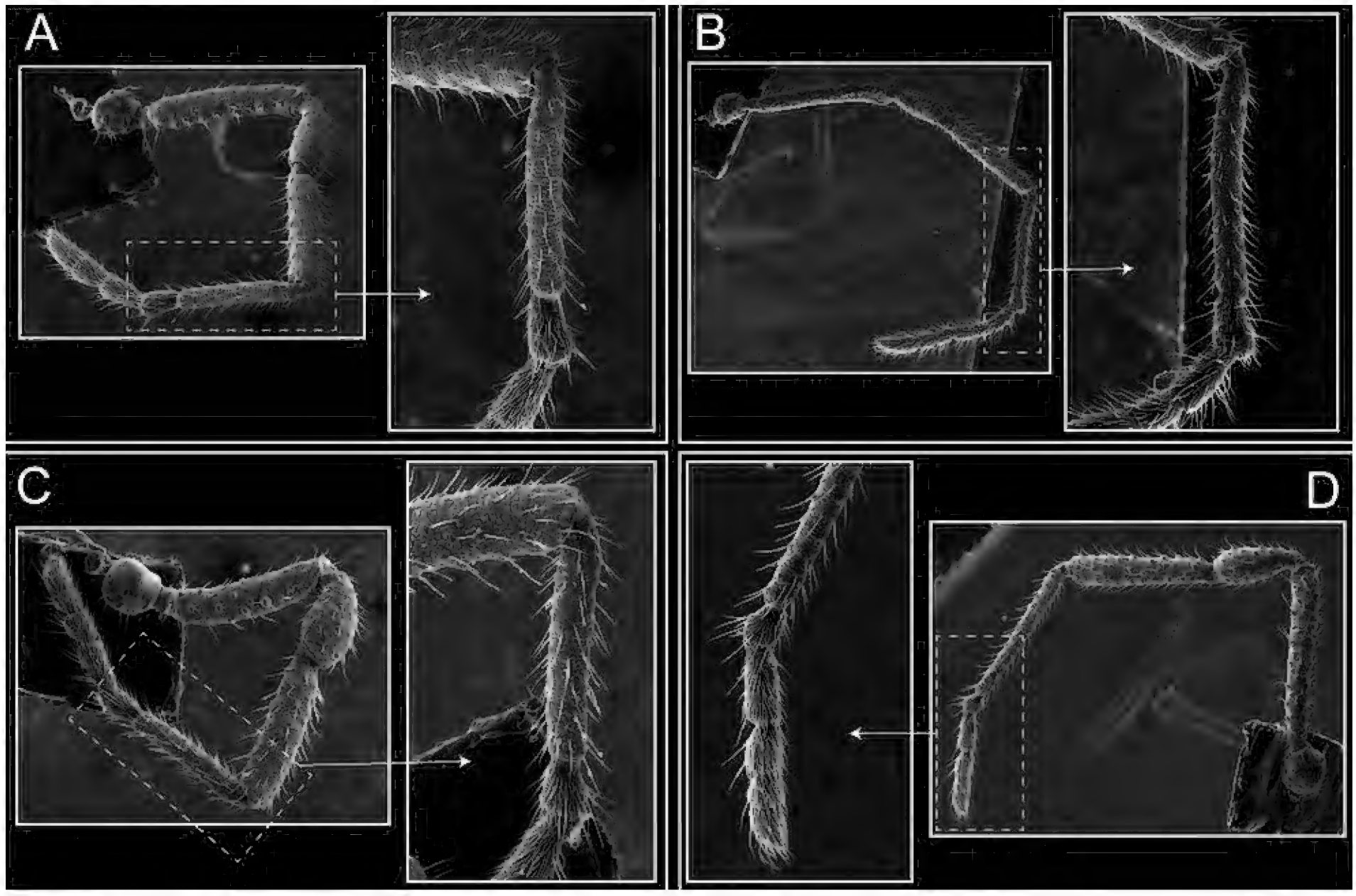

Figure 131. *Nerudiella pichi* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 µm (**A, C**); 500 µm (**B, D**).

Dorsum (Fig. 128, 129). Eta (η) hourglass-shaped dorsal scutum. Low ocularium. Dorsal scutum microgranulate, without clear delimitation of areas. The microgranulation and the setiferous tubercles are almost the same size, so it is difficult to delimit the rows of tubercles that are present in the dorsal scute and free tergites.

Chelicerae (Fig. 130A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II bearing scant setae.

Pedipalps (Fig. 130C, D). Trochanter with a small dorsal and ectal tubercle. Femora bearing an ectal row of setiferous tubercles; dorsal surface with a row of spines and a parallel row of setiferous granules on each side. Patella with a ventral setiferous tubercle, dorsal surface covered with setae. Tibia covered in setiferous granules, with three ectal and mesal spines with subdistal setae on each side. Tarsus with three mesal and four ectal spines with subdistal setae and setae and scant granules.

Legs (Fig. 131). Coxa I with setiferous tubercles, the large one with subdistal setae, II with setiferous tubercles, III and IV only with the microgranulation, three bridges between legs II and III, three between III and IV, five between leg IV and opisthosoma. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of leg III and < ⅓ of leg IV. Sternum arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 3–5–4–4.

Penis (Figs 132, 133). Pars distalis with a ventral plate reduced in its apical portion bearing a cleft that divides the plate into two halves. Each half has three pointed macrosetae on the ventral surface and one macroseta on the dorsal sur-

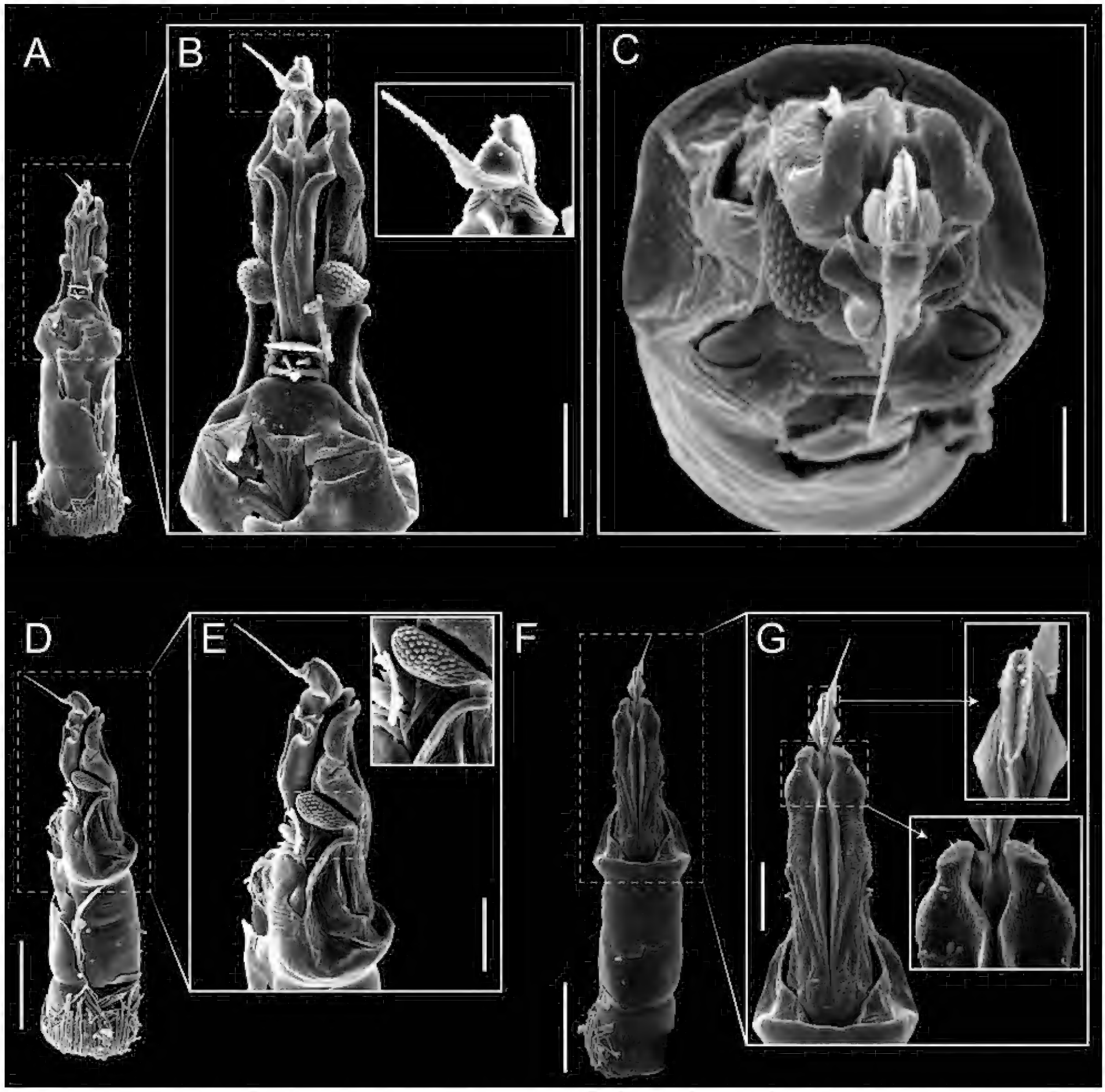

Figure 132. *Nerudiella pichi* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 100 μm (**B, E, G**); 50 μm (**C**).

face; capsula externa covering dorsal and lateral surfaces, having a very long cleft dividing the capsula interna into two halves, including two rounded, microsculpted processes; there is a dorsolateral plate attached to the pars basalis. Capsula interna longer than the capsula externa, the apical portion is long and thin.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 2.49, carapace length 1.00, dorsal scutum length 2.15, carapace max. width 1.54, mesotergum max. width 2.10. Appendage measurements: Pedipalps. Trochanter length 0.25, femora length 0.89, patella length 0.53, tibia length 0.56, tarsus length 0.67. Leg I: trochanter (tr) 0.24, femora (fe) 0.89, patella (pa) 0.48, tibia (ti) 0.62, metatarsus (mt) 0.82, tarsus (ta) 0.57. II: tr 0.28, fe 1.17, pa 0.45, ti 0.90, mt 1.06, ta 1.14. III: tr 0.30, fe 0.80, pa 0.38, ti 0.63, mt 0.80, ta 0.67. IV: tr 0.33, fe 1.17, pa 0.55, ti 0.96, mt 1.11, ta 0.80.

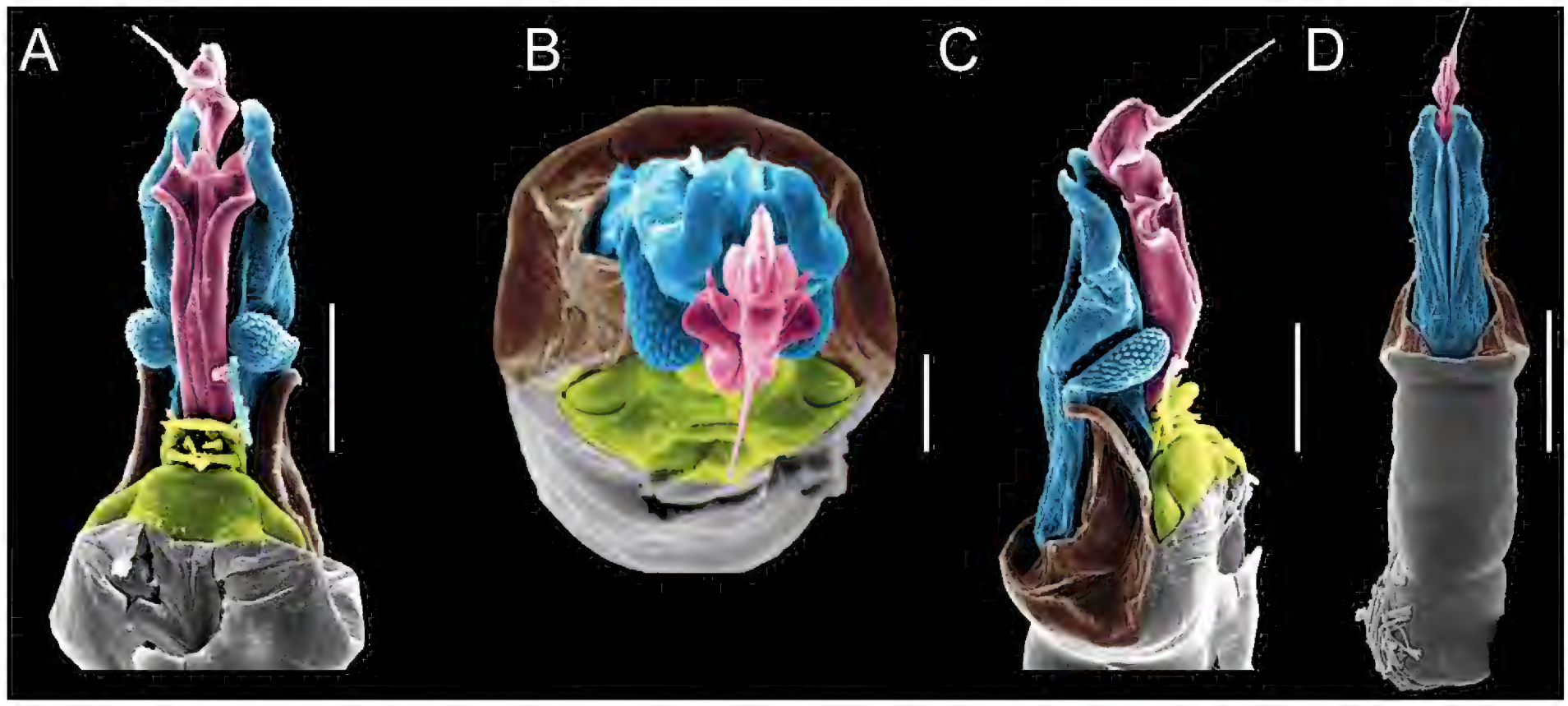

Figure 133. *Nerudiella pichi* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 μm (**A, C, D**); 50 μm (**B**).

***Nerudiella portai* sp. nov.**

https://zoobank.org/A678AF8D-AC23-4F53-95F2-2EA3D2DF35A9

Figs 134–139

Material examined. ***Holotype*.** ♂ **Chile.** Petorca: Cachagua, Quebrada El Tigre, E. Maury coll. 08.XI.1988 (MNHNCL). ***Paratypes*. Chile.** Petorca: Cachagua, Quebrada El Tigre, E. Maury coll., 08.XI.1988, 10 ♂, 12 ♀, 2 imm. (MACN). Same data, 6 ♂ (MACN).

Additional material. Chile. Quillota: Olmue, La Campana, S. Peck, J. Peck coll., 02.XII.1984, 4 ♂ 3 ♀ 4 imm. (FMNH). Valparaíso: Petorca: Zapallar -32.551318°, -71.459492° 200 m (GE), Tullgren Berlese, park bordering the beach, A. Porta coll., 28.XII.2017, 2 ♂, 20 imm. (MACN).

Etymology. Patronym in honor of Argentine arachnologist, acarologist, and mathematician Andrés Porta.

Diagnosis. This species can be distinguished from the other species in the genus by the morphology of the male genitalia, which includes the robust capsula externa with a U-shaped slit in the middle of the capsula externa; and wide capsula interna with an apical constriction.

Distribution. Chile: Valparaíso Region (Fig. 4F).

Description of male holotype. Measurements: Total length 4.00, carapace length 1.05, dorsal scutum length 2.1, carapace max. width 1.34, mesotergum max. width 1.91. Appendage measurements. Pedipalps. Trochanter length 0.18, femora length 0.93, patella length 0.52, tibia length 0.68, tarsus length 0.65. Leg I: trochanter (tr) 0.21, femora (fe) 0.95, patella (pa) 0.52, tibia (ti) 0.70, metatarsus (mt) 0.82, tarsus (ta) 0.69. II: tr 0.20, fe 1.29, pa 0.61, ti 0.88, mt 1.14, ta 1.38. III: tr 0.30, fe 0.75, pa 0.41, ti 0.57, mt 0.68, ta 0.82. IV: tr 0.36, fe 1.18, pa 0.55, ti 1.00, mt 1.025, ta 0.90.

Dorsum (Fig. 134, 135). Eta (η) hourglass-shaped dorsal scutum. Ocularium low, rounded. Dorsal scutum microgranulate, without prominent tubercles.

Figure 134. *Nerudiella portai* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

Chelicerae (Fig. 136A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II bearing sparse small setiferous tubercles, with one triangular tubercle prominent from the others in frontal view.

Pedipalps (Fig. 136C, D). Trochanter with a small dorsal and ventral tubercle. Femora bearing two parallel dorsal rows of setiferous spines, the ectal row has stronger spines than the mesal, it also has two proximal spines. Patella with a ventral-ectal setiferous tubercle and two ventral-ectal spines. Tibia covered

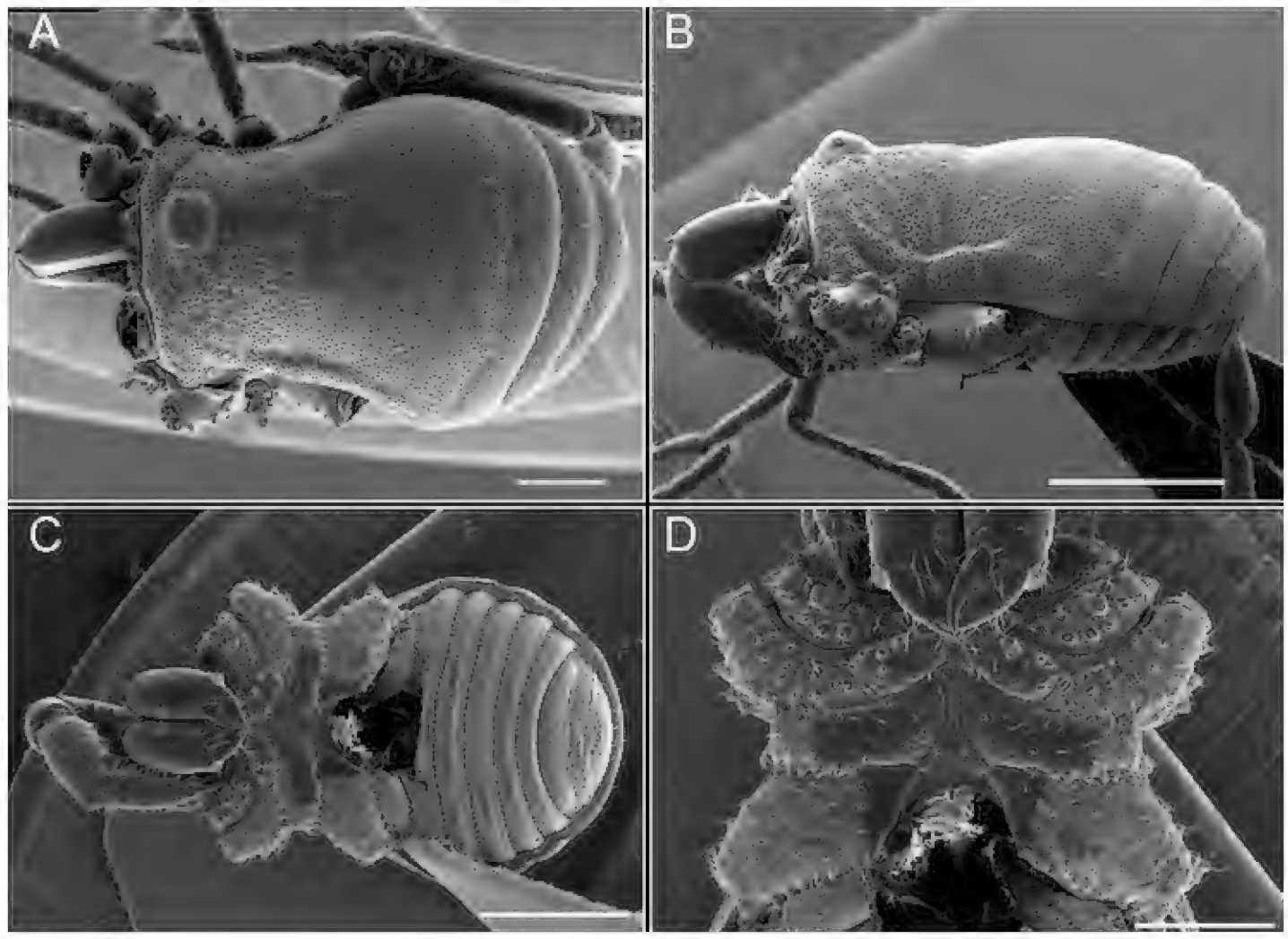

Figure 135. *Nerudiella portai* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 µm.

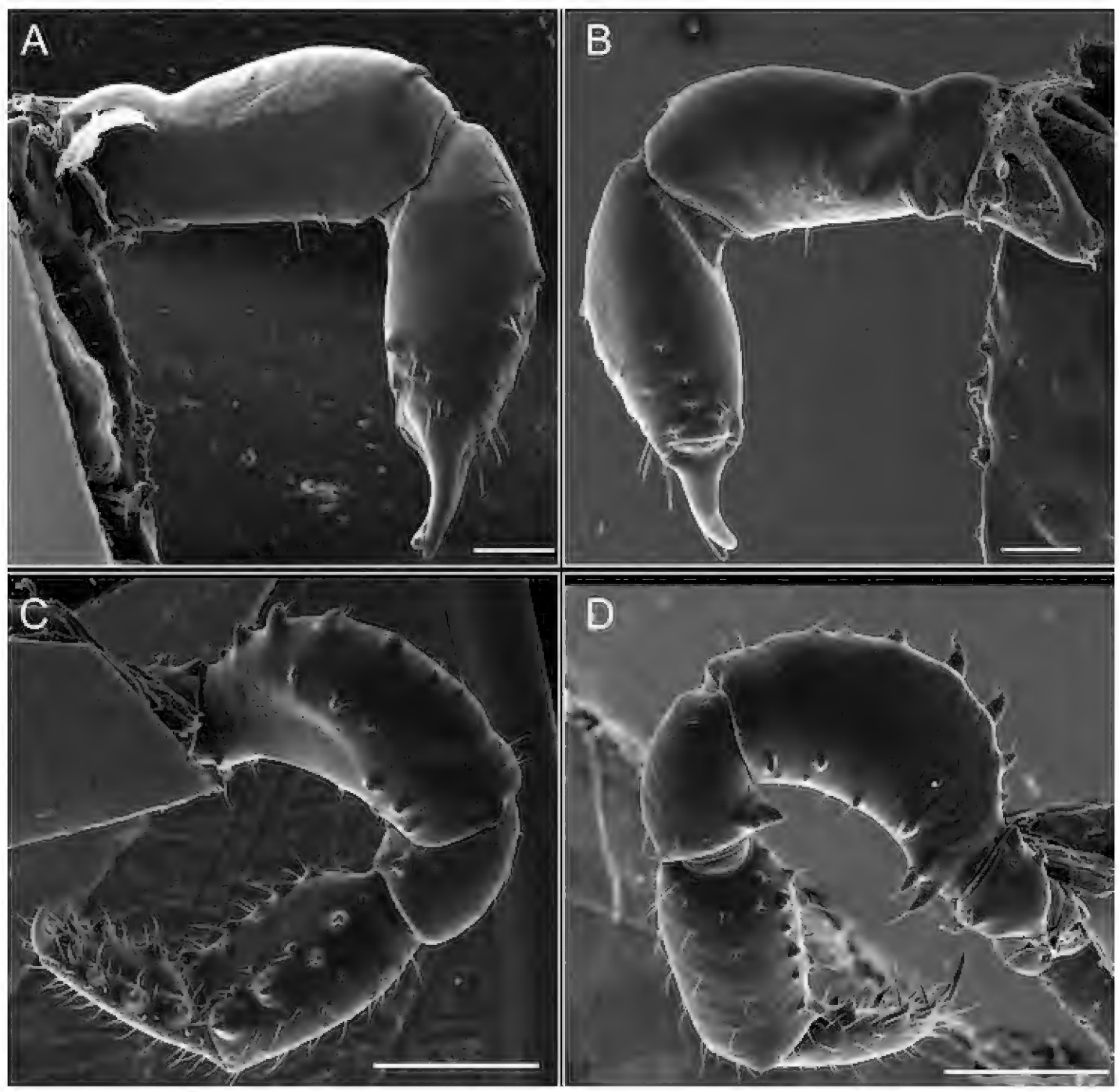

Figure 136. *Nerudiella portai* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 µm (**A, B**); 500 µm (**C, D**).

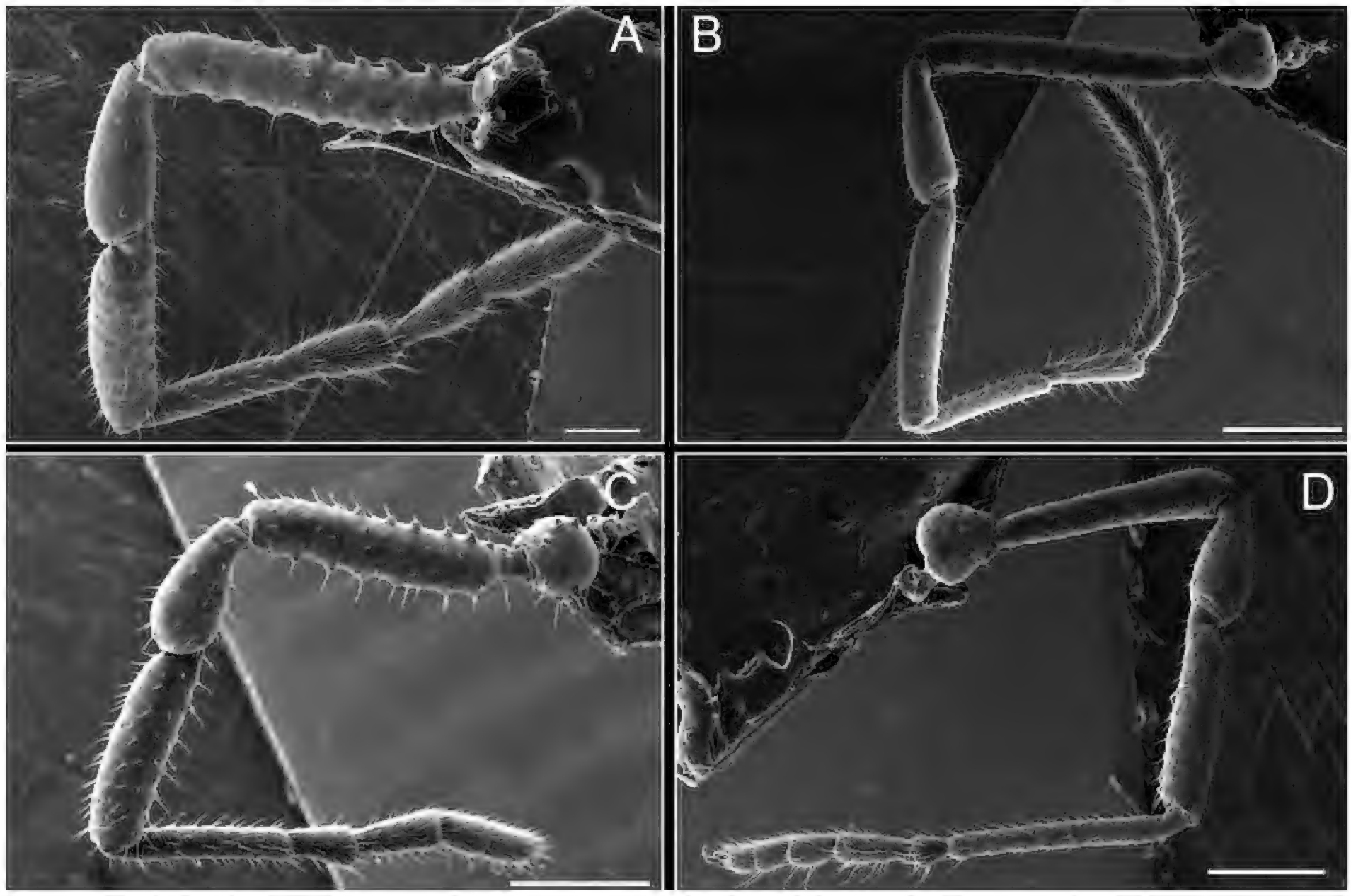

Figure 137. *Nerudiella portai* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A**); 500 μm (**B–D**).

in small ventral tubercles and two mesal spines. Tarsus with three mesal and ectal spines with subdistal setae in addition to setae and few granules.

Legs (Fig. 137). Coxa I with nine or ten setiferous tubercles, IV with six or seven tubercles connected to opisthosoma. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III and < ⅓ of IV. Leg II smooth with two or three small tubercles with subdistal setae on each side. Sternum arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 3–6–4–4.

Penis (Figs 138, 139). Pars distalis with a ventral plate bearing a cleft dividing the plate into two halves. Each half has three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; capsula externa covering dorsal surface, bearing a U-shaped slit halfway up plate; there is a dorsolateral plate attached to the pars basalis. Capsula interna slightly longer than the capsula externa, without rigid structures. The apical area of the structure is irregularly shaped and does not have a visible stylus.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 4.11, carapace length 1.02, dorsal scutum length 2.15, carapace max. width 1.33, mesotergum max. width 1.99. Appendage measurements: Pedipalps. Trochanter length 0.30. Femora length 0.87, patella length 0.41, tibia length 0.64, tarsus length 0.66. Leg I: trochanter (tr) 0.24, femora (fe) 0.95, patella (pa) 0.54, tibia (ti) 0.59, metatarsus (mt) 0.78, tarsus (ta) 0.71. II: tr 0.27, fe 1.23, pa 0.54, ti 0.93, mt 1.09, ta 1.25. III: tr 0.28, fe 0.75, pa 0.38, ti 0.55, mt 0.71, ta 0.69. IV: tr 0.28, fe 1.28, pa 0.69, ti 0.93, mt 1.25, ta 0.87.

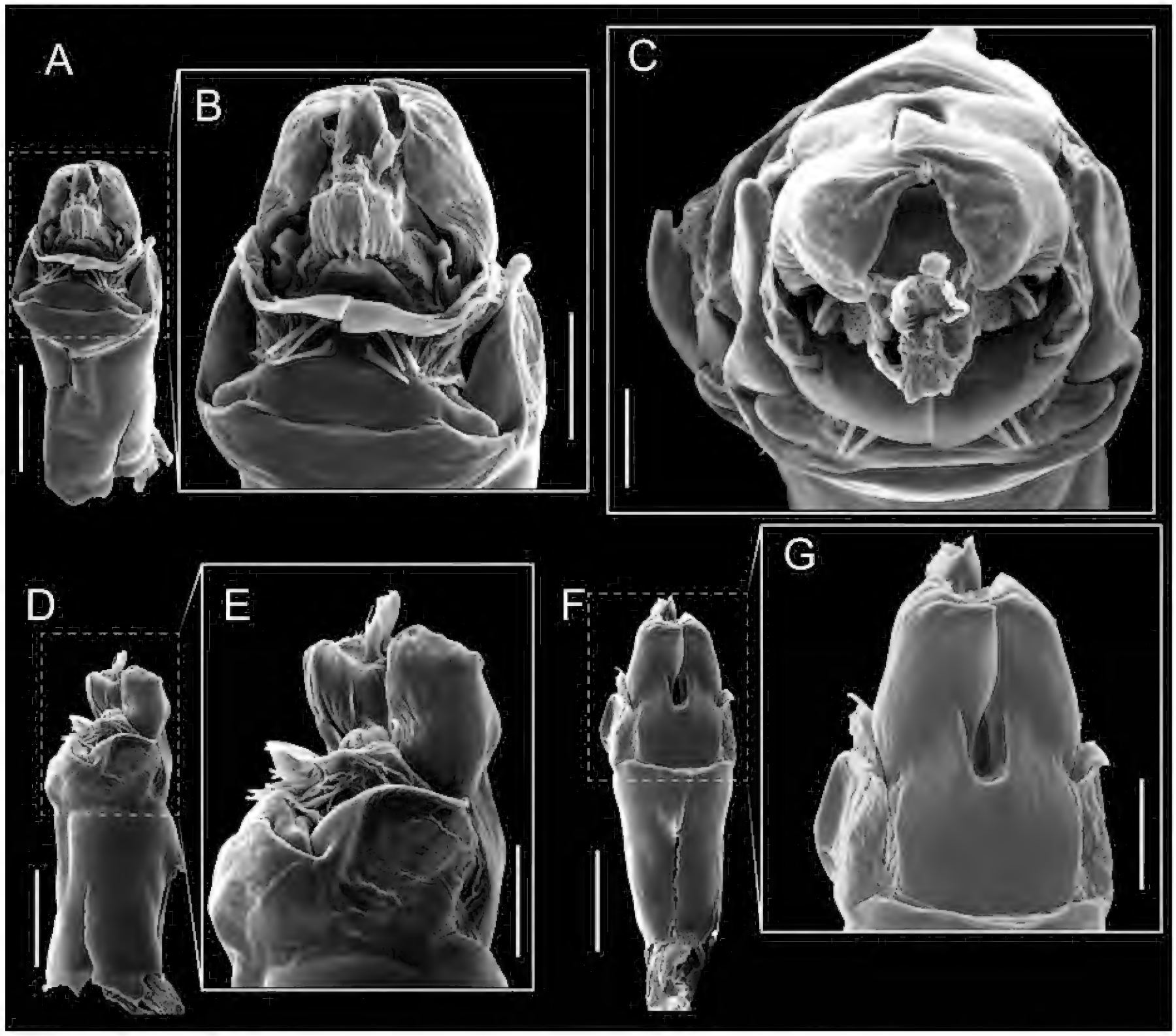

Figure 138. *Nerudiella portai* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 100 µm (**B, C, E, G**).

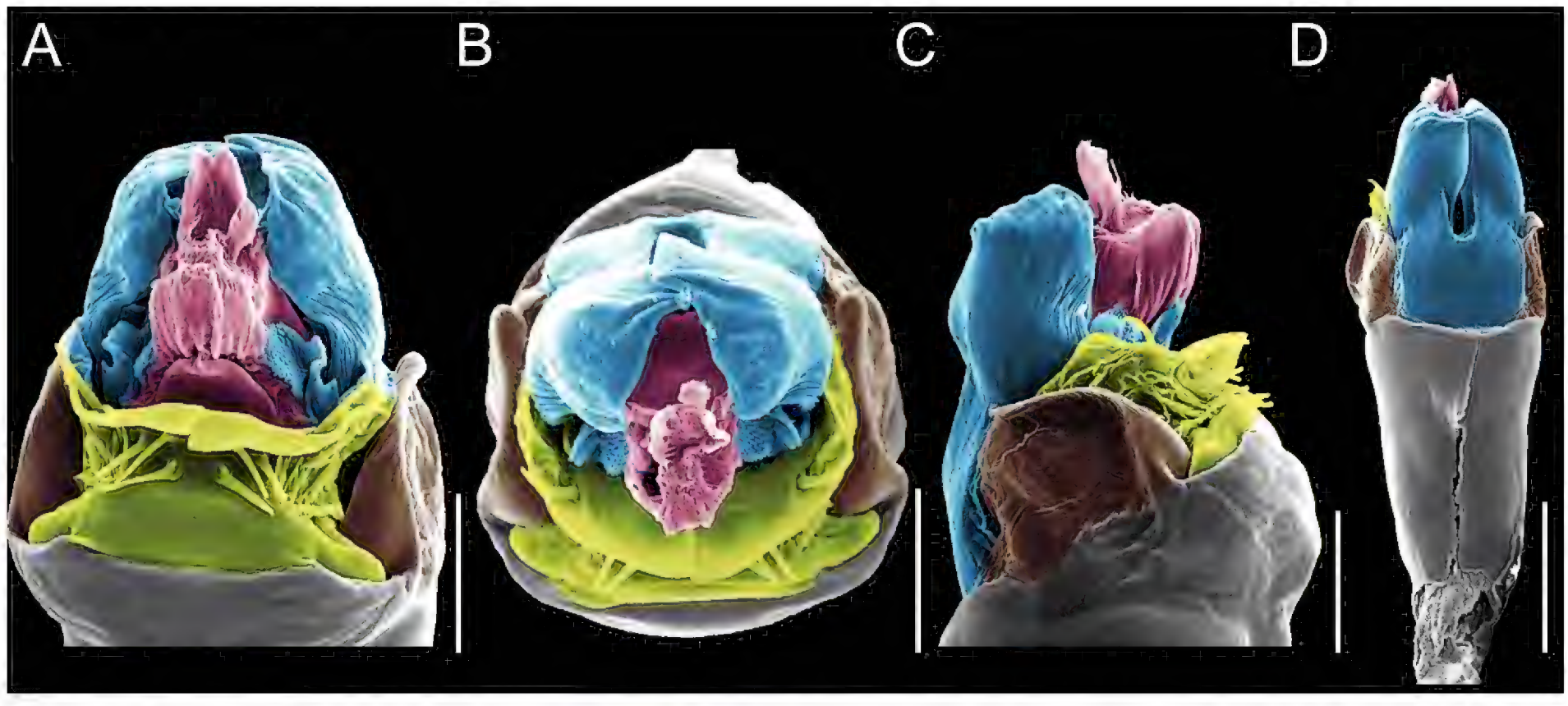

Figure 139. *Nerudiella portai* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 µm (**A–C**); 200 µm (**D**).

***Nerudiella quenes* sp. nov.**

https://zoobank.org/5E95016E-5E90-4131-8289-9DA206E43881

Figs 140, 141

Material examined. ***Holotype*.** ♂ **Chile.** Curicó Quebrada in front of Los Queñes, 34.99614°S, 70.80994°W, 665 m A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 10.I.2018 (MNHNCL). ***Paratypes*. Chile.** Curicó: Quebrada in front of Los Queñes, gorge in front of Los Queñes, 34.99614°S, 70.80994°W, 665 m, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll.,10. I.2018, 1 ♀ 3 imm.

Etymology. The specific epithet refers to the type locality of the species, the department of Los Queñes, located in the commune of Romeral, province of Curicó, Chile. Noun in apposition.

Diagnosis. This species can be distinguished from the other species in the genus by the morphology of the male genitalia, which includes the robust capsula externa with a "V"-shaped slit and long capsula interna with a triangular apical portion.

Distribution. Chile: Maule Region (Fig. 4F).

Description of male holotype. Measurements: Total length 2.0, carapace length 0.84, dorsal scutum length 1.7, carapace max. width 12, mesotergum max. width 1.6. Appendage measurements: Pedipalps. Trochanter length 0.22, femora length 0.79, patella length 0.43, tibia length 0.56, tarsus length 0.66. Leg I: trochanter (tr) 0.21, femora (fe) 0.87, patella (pa) 0.47, tibia (ti) 0.69, metatarsus (mt) 0.77, tarsus (ta) 0.66. II: tr 0.20, fe 1.1, pa 0.55, ti 0.86, mt 0.96, ta 1.2. III: tr 0.28, fe 0.75, pa 0.34, ti 0.58, mt 0.70, ta 0.60. IV: tr 0.30, fe 1.1, pa 0.53, ti 0.85, mt 1.1, ta 0.66.

Dorsum (Fig. 140). Eta (η) hourglass-shaped dorsal scutum. Low ocularium. Dorsal scutum microgranulate, without clear delineation of areas.

Chelicerae. Segment I with a small tubercle on the dorso-distal surface. Segment II with a frontal tubercle and bearing few setae.

Pedipalps. Trochanter with a small ectal and dorsal tubercles. Femora with two prominent ventroproximal spines and three prominent dorsal spines. Patella with two ventral setiferous granules. Tibia with three ectal and two mesal spines with subdistal setae, with scant granules in ventral view. Tarsus with four ectal and three mesal spines with subdistal setae.

Legs. Coxa II with ~8 rounded setiferous tubercles. Spiracles not obstructed by bridges. Sternum arrow-shaped. Legs I–IV covered in setae, tarsal area, and calcaneus densely setose. Tibiae I–III with a ventral and dorsal row of small setiferous tubercles, IV with a row of four distal-ventral tubercles with setae. Calcaneus smaller than astragalus, ≥ 3× smaller (leg I), 4× (II, III), and 5× (leg IV). Tarsal count: 3–6–4–4.

Penis (Fig. 141). Pars distalis with a large ventral plate bearing a cleft that divides the plate into two lamellae. Each lamella has three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; capsula externa covering dorsal and lateral surfaces, having a cleft dividing dorsal fold into two halves; there is a dorsolateral plate attached to the pars basalis. Capsula interna longer than the capsula externa, with a visible stylus in its apical portion.

Female. Similar to male, with shorter pedipalpal femora.

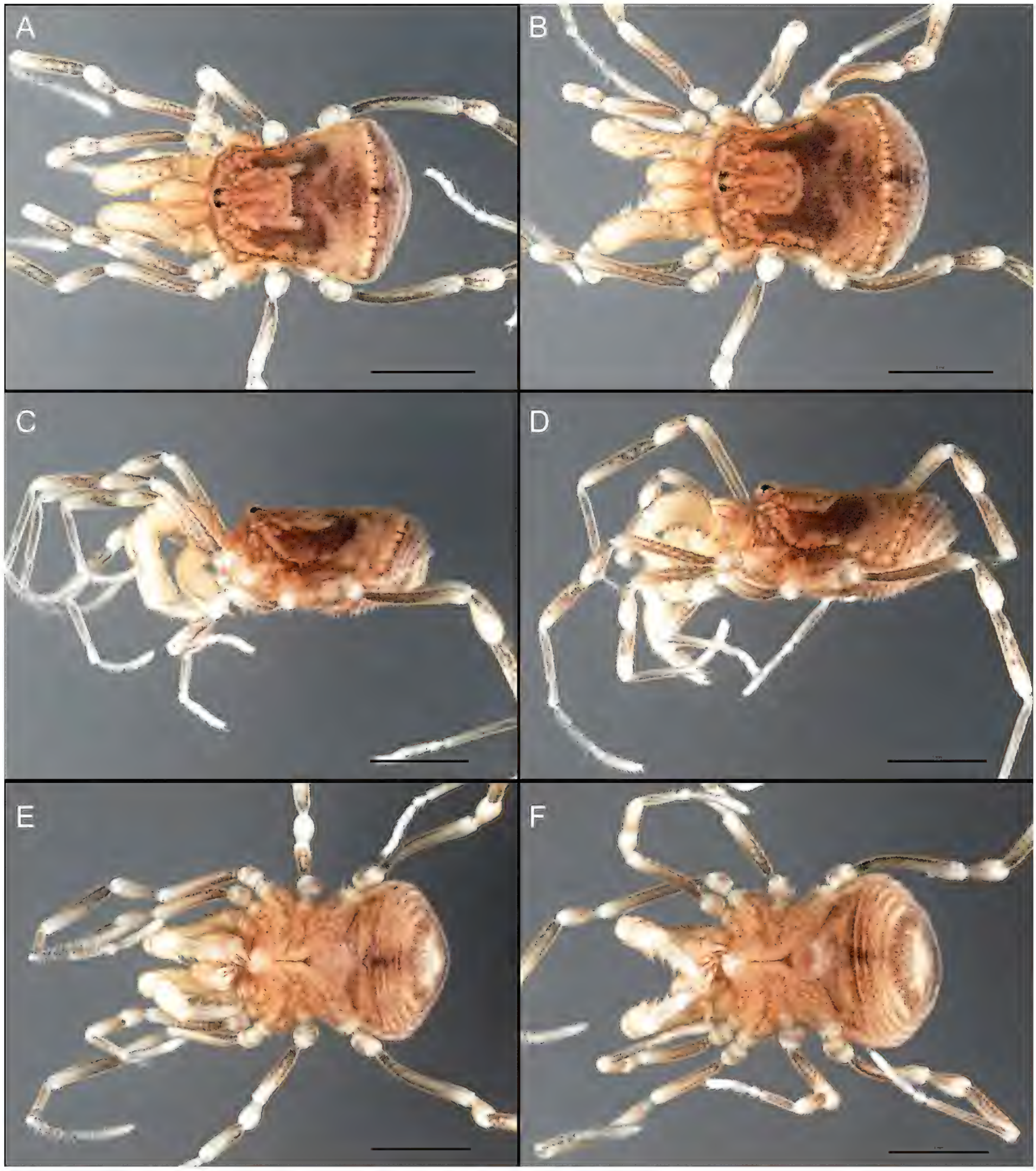

Figure 140. *Nerudiella quenes* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

Female measurements. Total length 2.07, carapace length 0.89, dorsal scutum length 1.72, carapace max. width 1.24, mesotergum max. width 1.77. Appendage measurements: Pedipalps. Trochanter length 0.19, femora length 0.76, patella length 0.47, tibia length 0.50, tarsus length 0.68. Leg I: trochanter (tr) 0.22, femora (fe) 0.84, patella (pa) 0.44, tibia (ti) 0.65, metatarsus (mt) 0.71, tarsus (ta) 0.64. II: tr 0.24, fe 1.09, pa 0.51, ti 0.87, mt 0.95, ta 1.3. III: tr 0.23, fe 0.75, pa 0.35, ti 0.60, mt 0.72, ta 0.61. IV: tr 0.31, fe 1.08, pa 0.57, ti 0.93, mt 1.16, ta 0.68.

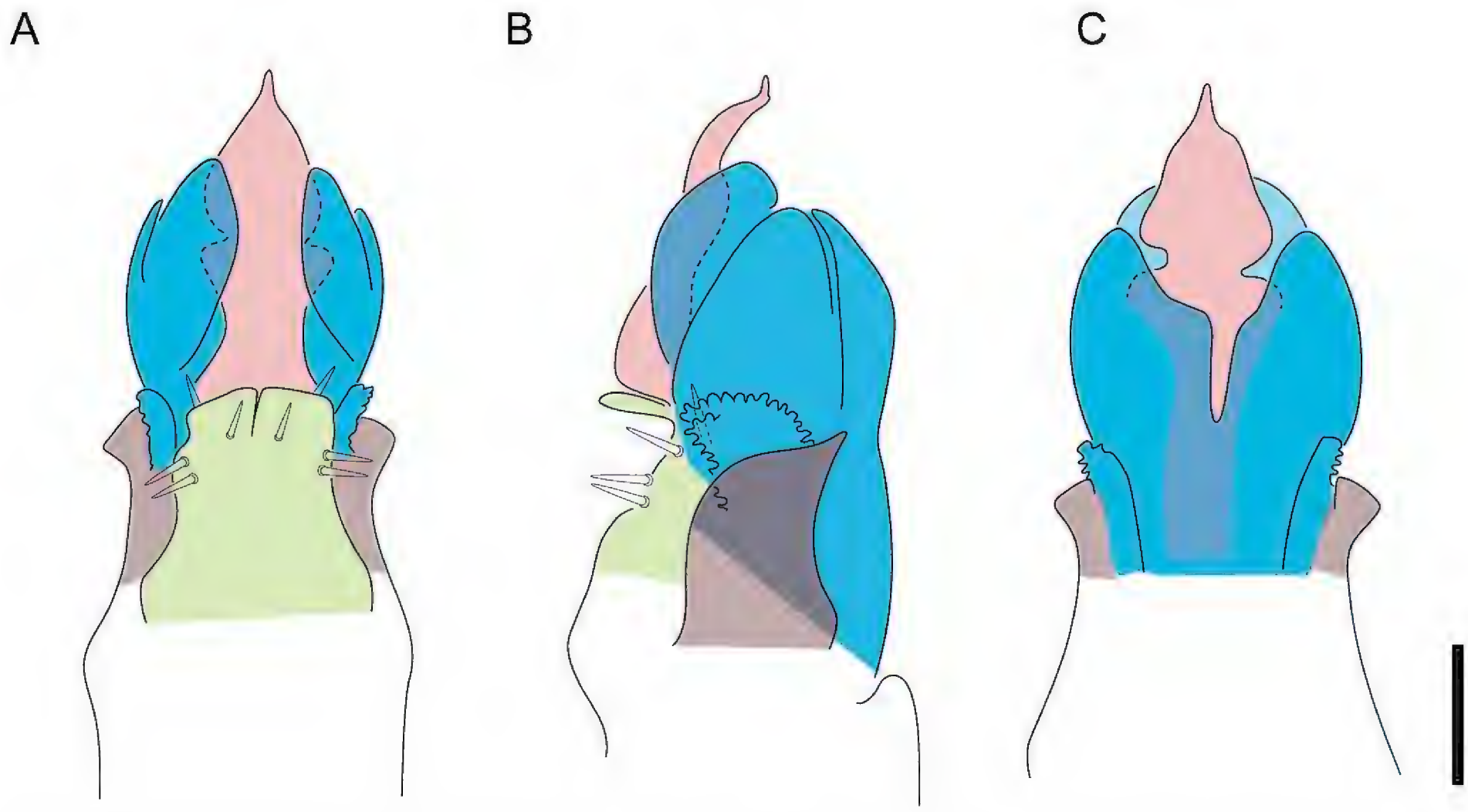

Figure 141. *Nerudiella quenes* sp. nov. Penis ventral **A** lateral **B** dorsal **C** capsula interna (red), Capsula externa (blue), dorsolateral plate (brown), ventral plate (green). Scale bar: 100 µm.

***Nerudiella vilches* sp. nov.**

https://zoobank.org/1E1E59C3-6A5F-415A-B640-C49EB3A2AC77

Figs 142–147

Material examined. *Holotype*. ♂ **Chile.** Cachapoal: Río de los Cipreses National Reserve, Near Potrero, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 09.I.2018 (MNHNCL). ***Paratypes*. Chile.** Cachapoal: Río de los Cipreses National Reserve, Near Potrero, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll., 09.I.2018, 1 ♂ 2 ♀ 5 imm. (MACN). Osorno. Talca, Alto de Vilches, N. Platnick, K.Catley, M. Ramírez, T.Allen coll., 14–15/XI/1993, 1 ♂ 2 imm. (AMNH). Talca. Vilches, 132 km E. of Talca, E. Maury coll., 07–08.I.1989, 2 ♂ 1 ♀ (MACN). Alto de Vilches, 70 km E Talca, S.Peck, J.Peck coll., 05.XII.1985, 3 ♂ 3 ♀ 4 imm. (FMNH). Talca. Vilches, A.Roig coll., 17.I.1984, 2 ♂ 1 ♀ (MACN).

Additional material. Chile. RN Altos del Lircay, E Vilches Alto, A. Ojanguren, A. Pérez-González, M. Ramírez, G. Azevedo, W. Porto coll. 11.I.2018 1 ♂ (MACN).

Etymology. The specific epithet refers to the type locality of the species, Vilches, located in the commune of San Clemente, province of Talca, Chile. Noun in apposition.

Diagnosis. This species can be easily distinguished from the other species in the genus by having a projecting process on the ventral femoral region of the pedipalp. The capsula externa of the genitalia does not have dorsal slits but bears a pair of lateral processes.

Distribution. Chile: Maule Region (Fig. 4F).

Description of male holotype. Measurements: Total length 4.12, carapace length 1.05, dorsal scutum length 2.42, carapace max. width 1.33, mesotergum

Figure 142. *Nerudiella vilches* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 1 mm. Species of Clade C, see Fig. 3.

max. width 1.83. Appendage measurements: Pedipalps. Trochanter length 0.24, femora length 0.94, patella length 0.47, tibia length 0.80, tarsus length 0.71. Leg I: trochanter (tr) 0.30, femora (fe) 0.20, patella (pa) 0.87, tibia (ti) 0.41, metatarsus (mt) 0.69, tarsus (ta) 0.76. II: tr 0.64, fe 0.30, pa 1.13, ti 0.52, mt 0.86, ta 0.94. III: tr 1.24, fe 0.29, pa 0.79, ti 0.32, mt 0.60, ta 0.62. IV: tr 0.68, fe 0.30, pa 1.16, ti 0.55, mt 0.92, ta 1.12, ta 0.74.

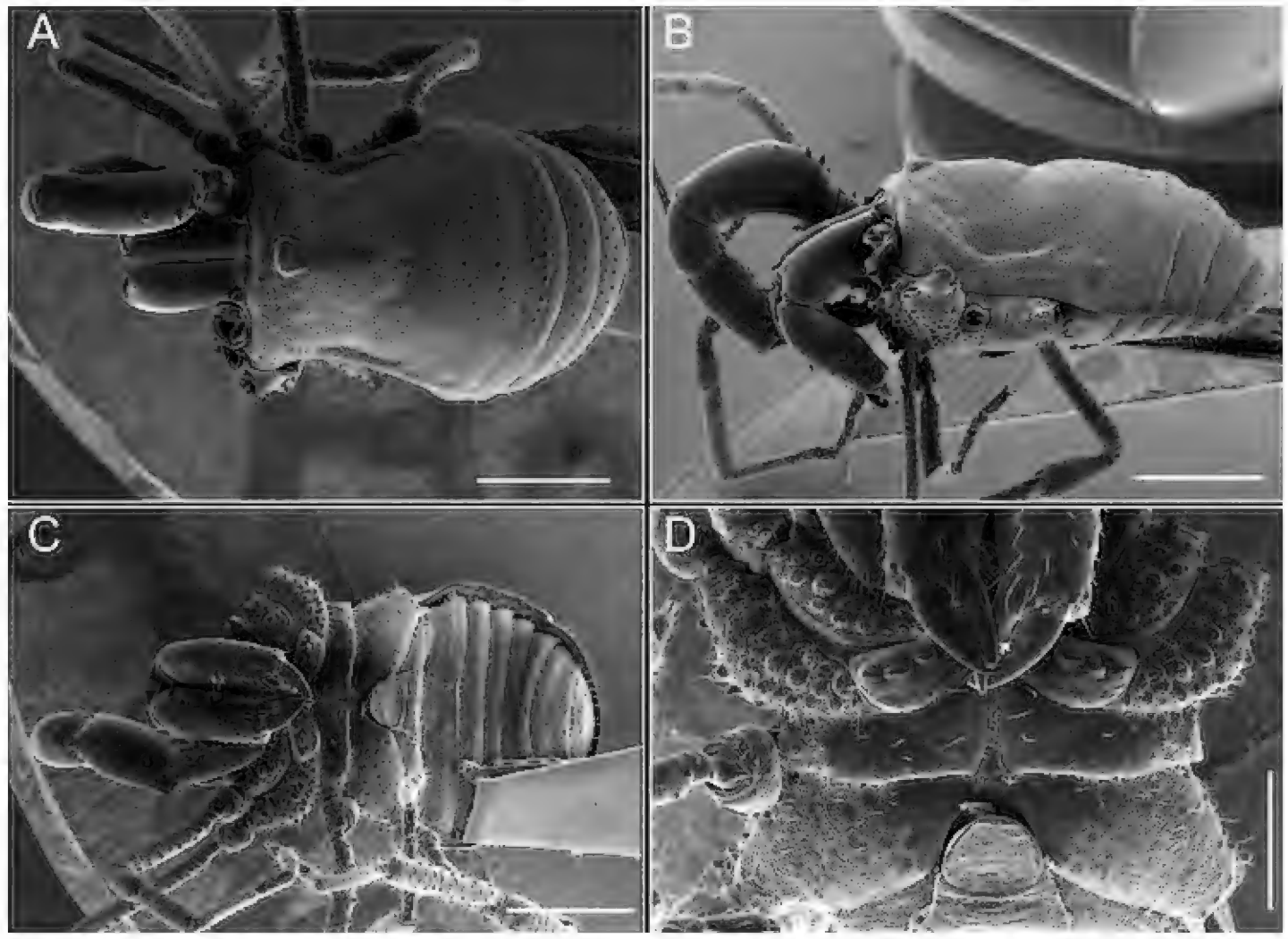

Figure 143. *Nerudiella vilches* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 μm (**D**).

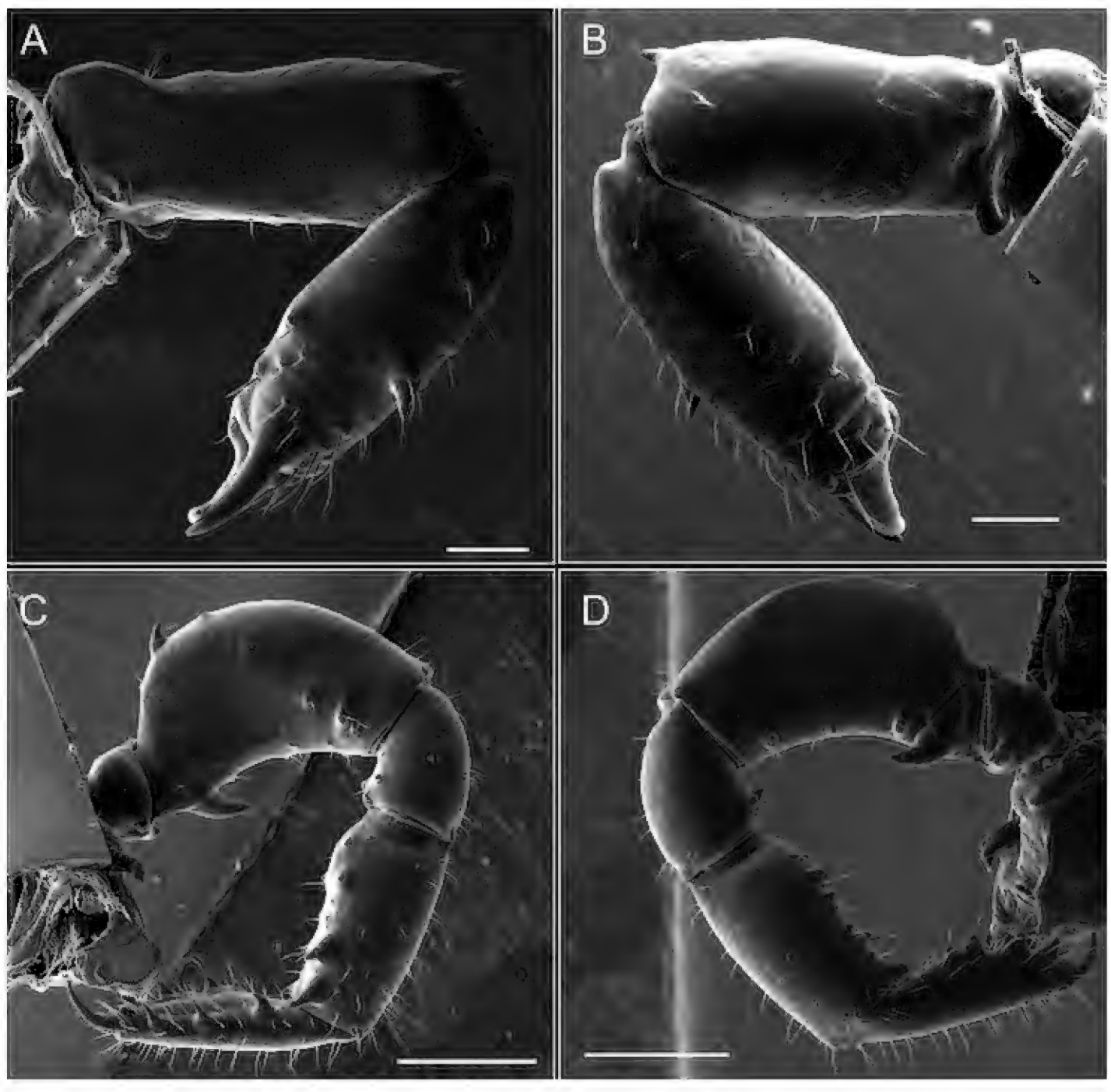

Figure 144. *Nerudiella vilches* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm (**A, B**); 500 μm (**C, D**).

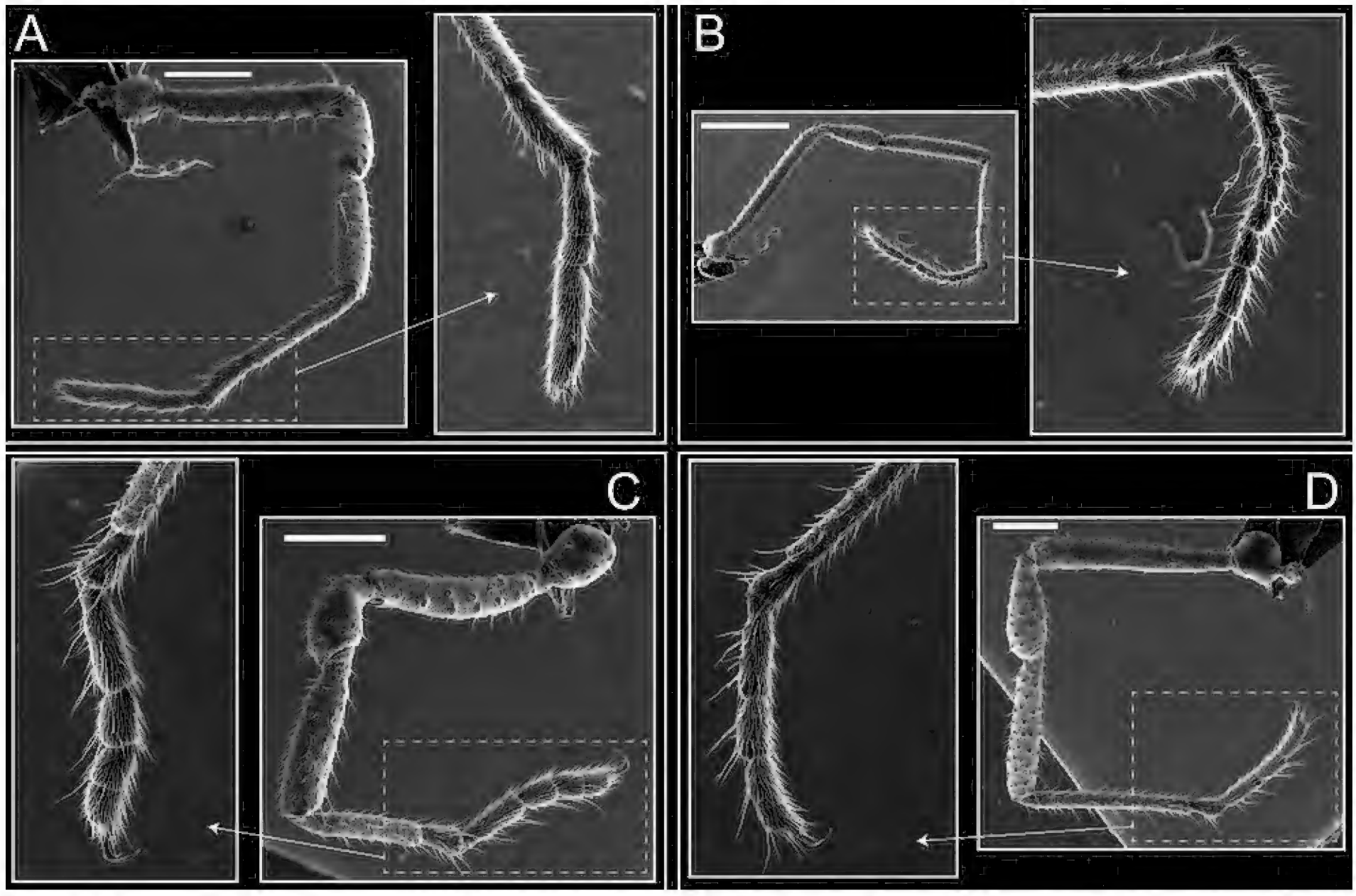

Figure 145. *Nerudiella vilches* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 500 μm (**A, C, D**); 1 mm (**B**).

Dorsum (Fig. 142, 143). Eta (η) hourglass-shaped dorsal scutum. Low ocularium; dorsal scutum microgranulate, without clear delimitation of areas. Areas III–IV with a row of 6–7 small setiferous tubercles; posterior margin with a row of 12 small rounded setiferous tubercles. All free tergites have two rows of small setiferous tubercles.

Chelicerae (Fig. 144A, B). Segment I with a small tubercle on the dorso-distal surface. Segment II with a frontal tubercle and bearing few setae.

Pedipalps (Fig. 144C, D). Trochanter with a small ectal and dorsal tubercle. Femora bearing a forward-curved proximal ventral spine, a ventral row of three small setiferous granules, a dorsal tubercle with subdistal setae, and three distal setiferous granules. Patella with two ventral setiferous granules. Tibia with three ectal and two mesal spines with subdistal setae, with scant granules in ventral view. Tarsus with four ectal and three mesal spines with subdistal setae.

Legs (Fig. 145). Coxa I–II covered with rounded setiferous tubercles, the distal one is acute and has a subdistal seta, III and IV only with microgranulation. Spiracles not obstructed by bridges. Smooth area occupying ⅓ of leg II (with three tubercles), ¾ of III and ⅓ of IV. Sternum arrow-shaped. Legs I–IV covered in setae. Tibiae I–III with a ventral and dorsal row of small setiferous tubercles, IV with a row of four distoventral tubercles with setae. Calcaneus smaller than the astragalus, ≥ 3× smaller (leg I), 4× (II, III), and 5× (leg IV). Tarsal count: 3–6–4–4.

Penis (Figs 146, 147). Pars distalis with a ventral plate bearing a cleft dividing the plate into two lamellae. Each lamellae has three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; capsula externa

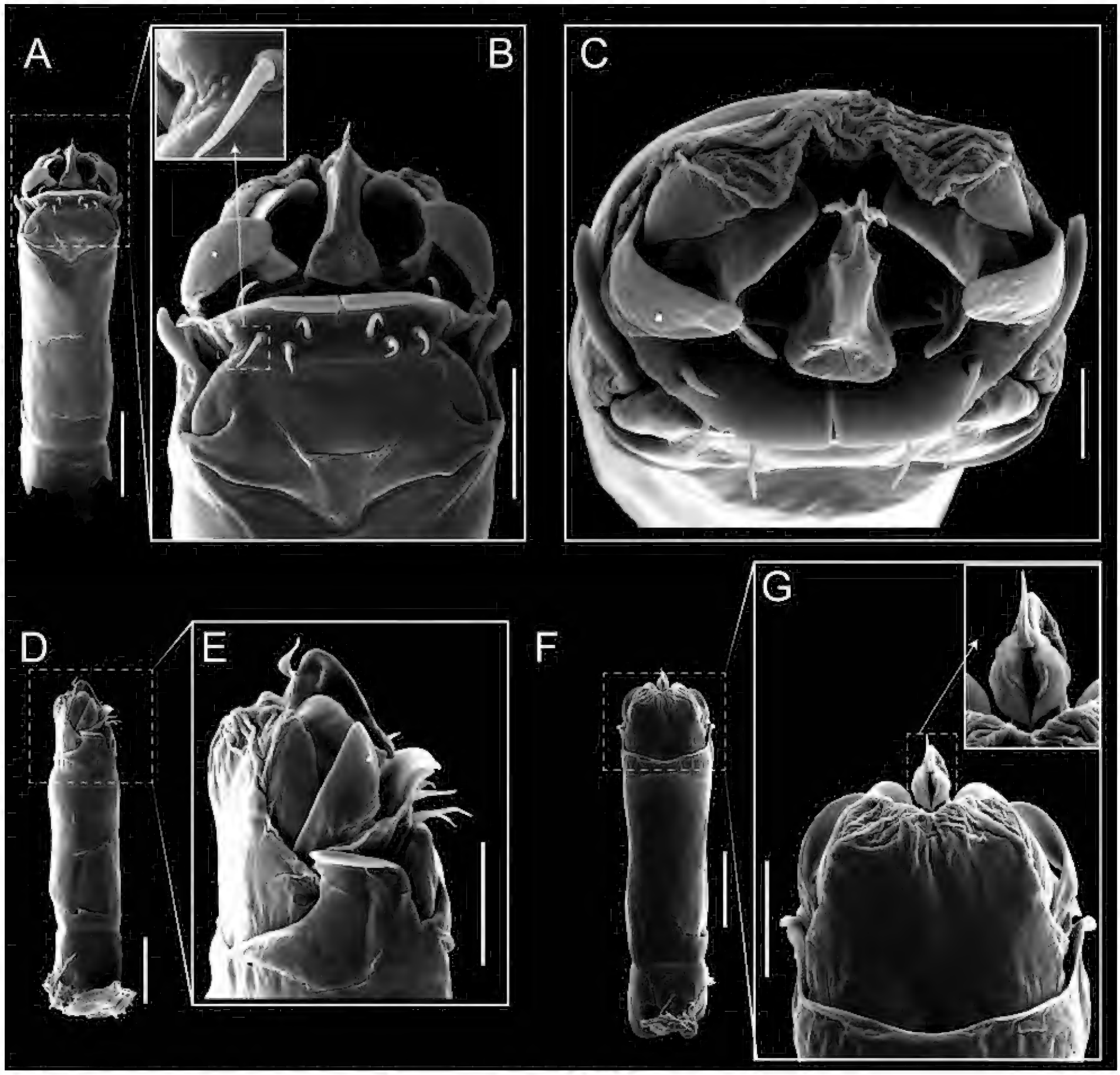

Figure 146. *Nerudiella vilches* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 100 μm (**B, E, G**); 50 μm (**C**).

covering dorsal and lateral surfaces, without cleft; it has a pair of lateral processes that are projected ventrally. The capsula interna bears a pair of laminar processes; the apical region has a small dorsal opening and a fine process.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Total length 3.67, carapace length 0.93, dorsal scutum length 1.90, carapace max. width 1.16, mesotergum max. width 1.77. Appendage measurements: Pedipalps. Trochanter length 0.22, femora length 0.85, patella length 0.47, tibia length 0.68, tarsus length 0.59. Leg I: trochanter (tr) 0.19, femora (fe) 0.84, patella (pa) 0.46, tibia (ti) 0.63, metatarsus (mt) 0.77, tarsus (ta) 0.67. II: tr 0.27, fe 1.12, pa 0.51, ti 0.86, mt 0.97, ta 1.30. III: tr 0.27, fe 0.82, pa 0.35, ti 0.55, mt 0.65, ta 0.66. IV: tr 0.33, fe 1.20, pa 0.56, ti 0.91, mt 1.07, ta 0.82.

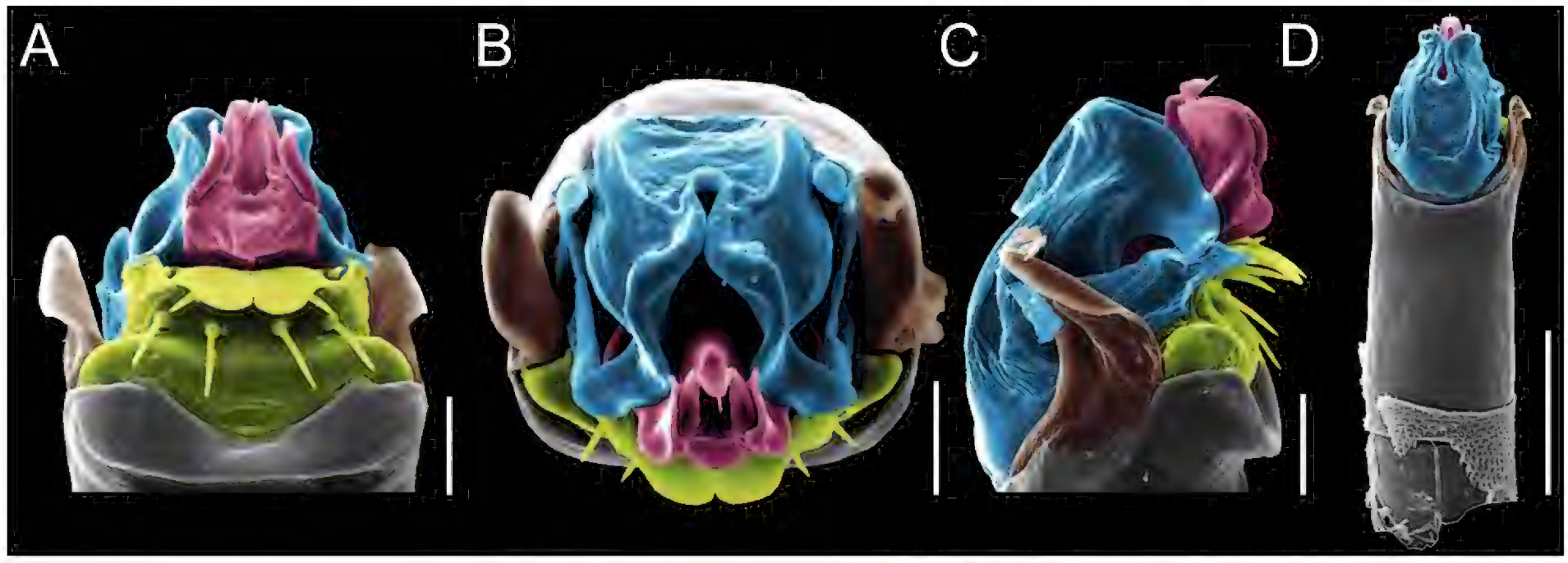

Figure 147. *Nerudiella vilches* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 μm (**A, C, D**); 50 μm (**B**).

***Nerudiella wekufe* sp. nov.**

https://zoobank.org/F57E3734-45AE-4AEF-AD70-1A3A27AA7CC7

Figs 148–153

Material examined. ***Holotype*.** ♂ **Chile.** Concepción: El Manzano, T. Cekalovic coll. 31.III.1984 (MNHNCL). ***Paratypes*. Chile.** Concepción: El Manzano, T. Cekalovic coll., 03.I.1985, 1 ♂ (MACN). Same data, 03.I.1985, 1 ♀ (MACN). Same locality and collector, 31.III.1984, 1 ♂, 1 ♀, 2 imm. (MACN).

Etymology. The specific epithet refers to the "Wekufe", a spirit and/or harmful force (energy) from Mapuche belief and mythology. Noun in apposition.

Diagnosis. This species can be distinguished from other species in the genus by the presence of an apophysis in the anterior portion of the ocularium. Additionally, in males, the genitalia exhibit a longer capsula externa compared to the capsula interna, providing a distinguishing characteristic.

Distribution. Chile: Bío-Bío Region (Fig. 4F).

Description of male holotype. Measurements: Total length 2.4, carapace length 1.0, dorsal scutum length 1.9, carapace max. width 1.4, mesotergum max. width 1.8. Appendage measurements: Pedipalps. Trochanter length 0.22, femora length 0.8, patella length 0.47, tibia length 0.57, tarsus length 0.76. Leg I: trochanter (tr) 0.25, femora (fe) 0.81, patella (pa) 0.40, tibia (ti) 0.62, metatarsus (mt) 0.73, tarsus (ta) 0.61. II: tr 0.26, fe 1.00, pa 0.54, ti 0.82, mt 0.89, ta 1.2. III: tr 0.28, fe 0.71, pa 0.37, ti 0.56, mt 0.69, ta 0.63. IV: tr 0.29, fe 0.98, pa 0.55, ti 0.85, mt 1.1, ta 0.68.

Dorsum (Fig. 148, 149). Eta (η) hourglass-shaped dorsal scutum. Ocularium low and rounded, with an anterior apophysis. Dorsal scutum and free tergites microgranulate. Although the areas of the dorsal scutum do not exhibit clear separation, they are covered with small setiferous tubercles, which are more prominent on the dorsal scutum and free tergites.

Chelicerae (Fig. 150A, B). Segment I with a sharp tubercle on the dorso-distal surface and three small ventral-proximal tubercles. Segment II with scattered setae in ectal and ventral views, with one triangular tubercle prominent from the others in front view.

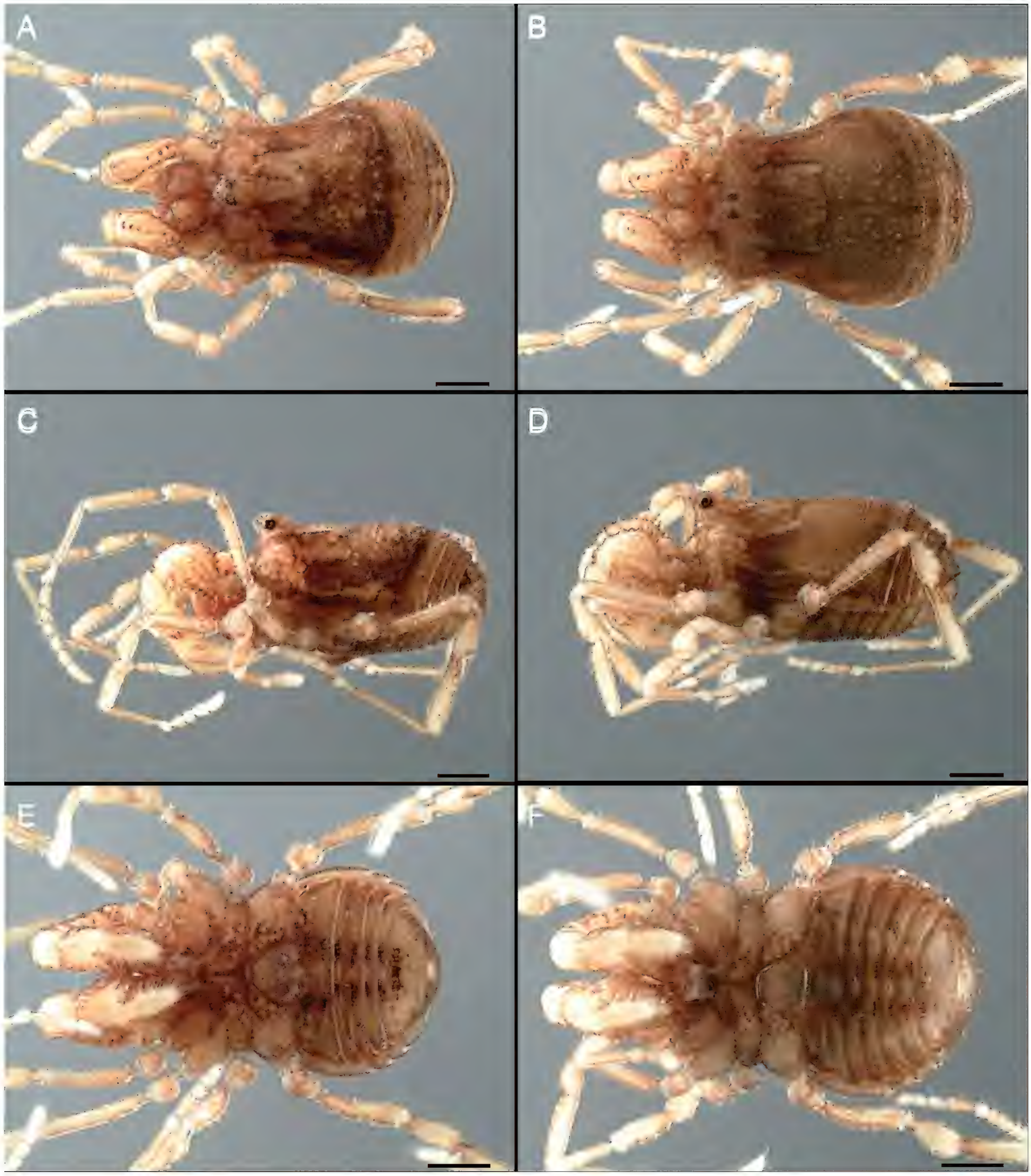

Figure 148. *Nerudiella wekufe* sp. nov. habitus, male **A** dorsal view **C** lateral view **E** ventral view. Female **B** dorsal view **D** lateral view **F** ventral view. Scale bars: 500 μm.

Pedipalps (Fig. 150C, D). Trochanter with two small dorsal tubercles and a ventral one. Femora with two parallel rows of dorsal and spines. Patella with a mesal tubercle and small sparse tubercles. Tibia with three ventral-ectal and two ventral-mesal spines, lateral and dorsal areas with small setiferous tubercles. Tarsus with three mesal and ectal spines with subdistal setae in addition to setae and few setae.

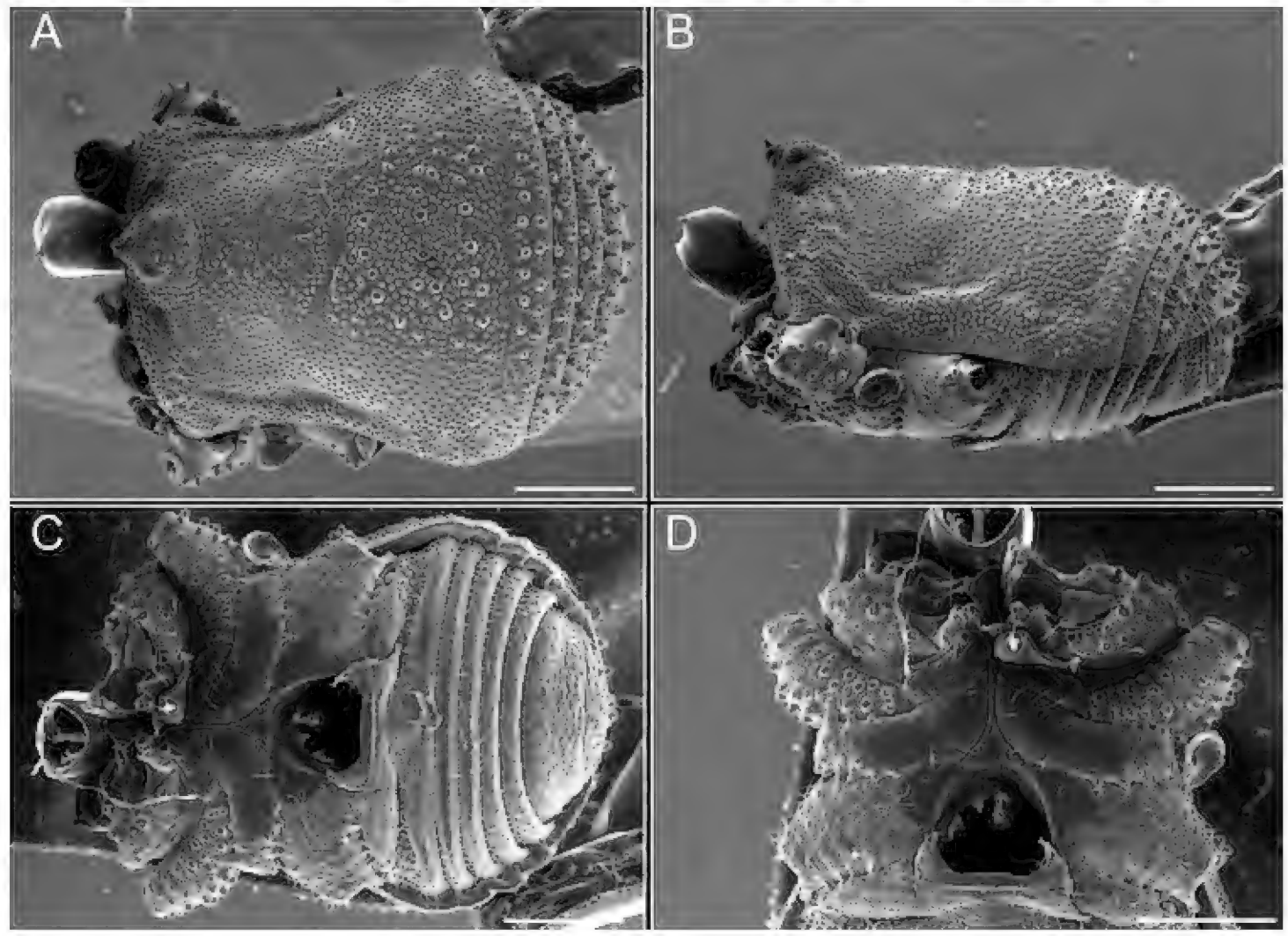

Figure 149. *Nerudiella wekufe* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 500 μm (**A, B, C**); 1 mm (**D**).

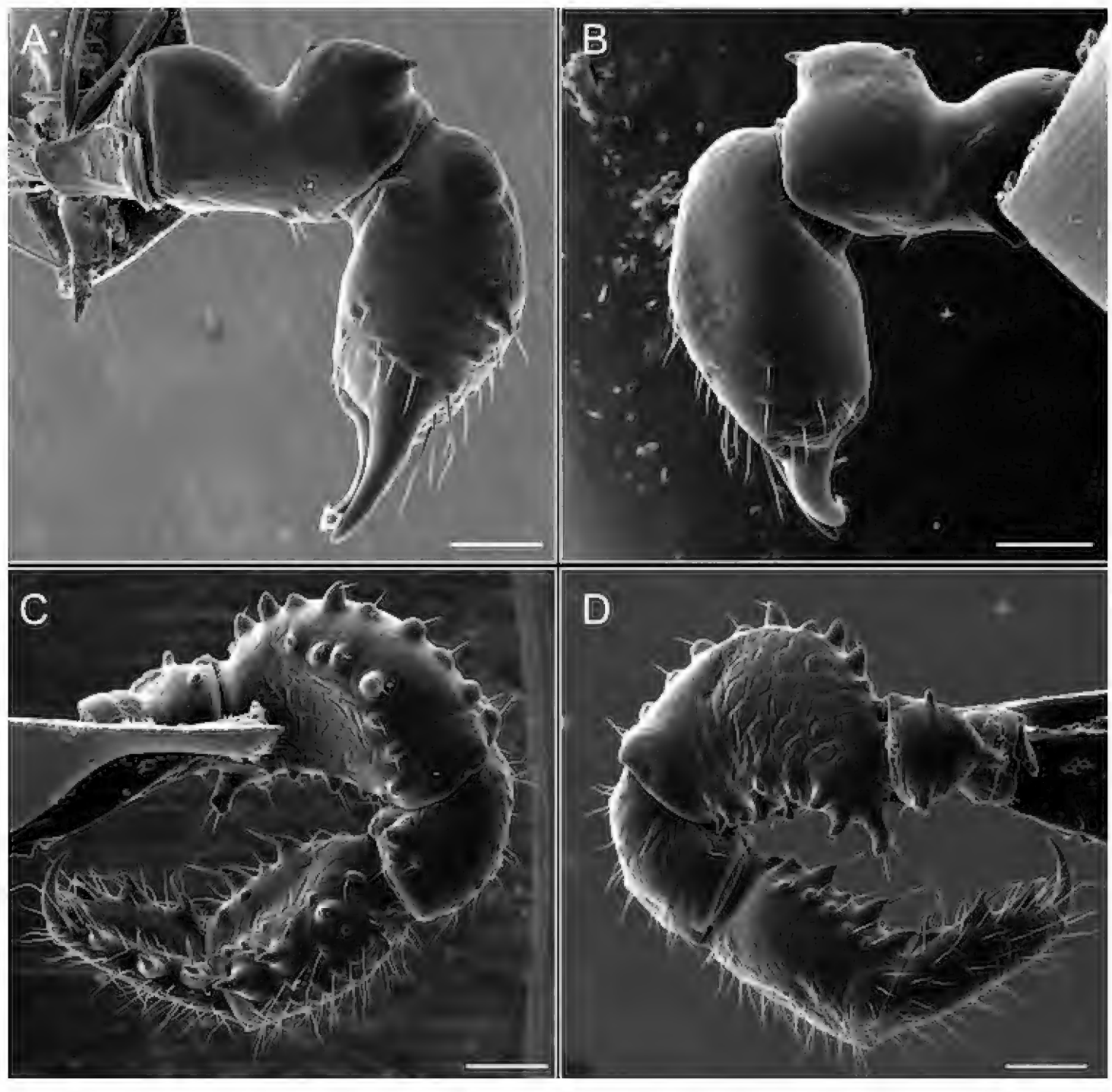

Figure 150. *Nerudiella wekufe* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars: 200 μm.

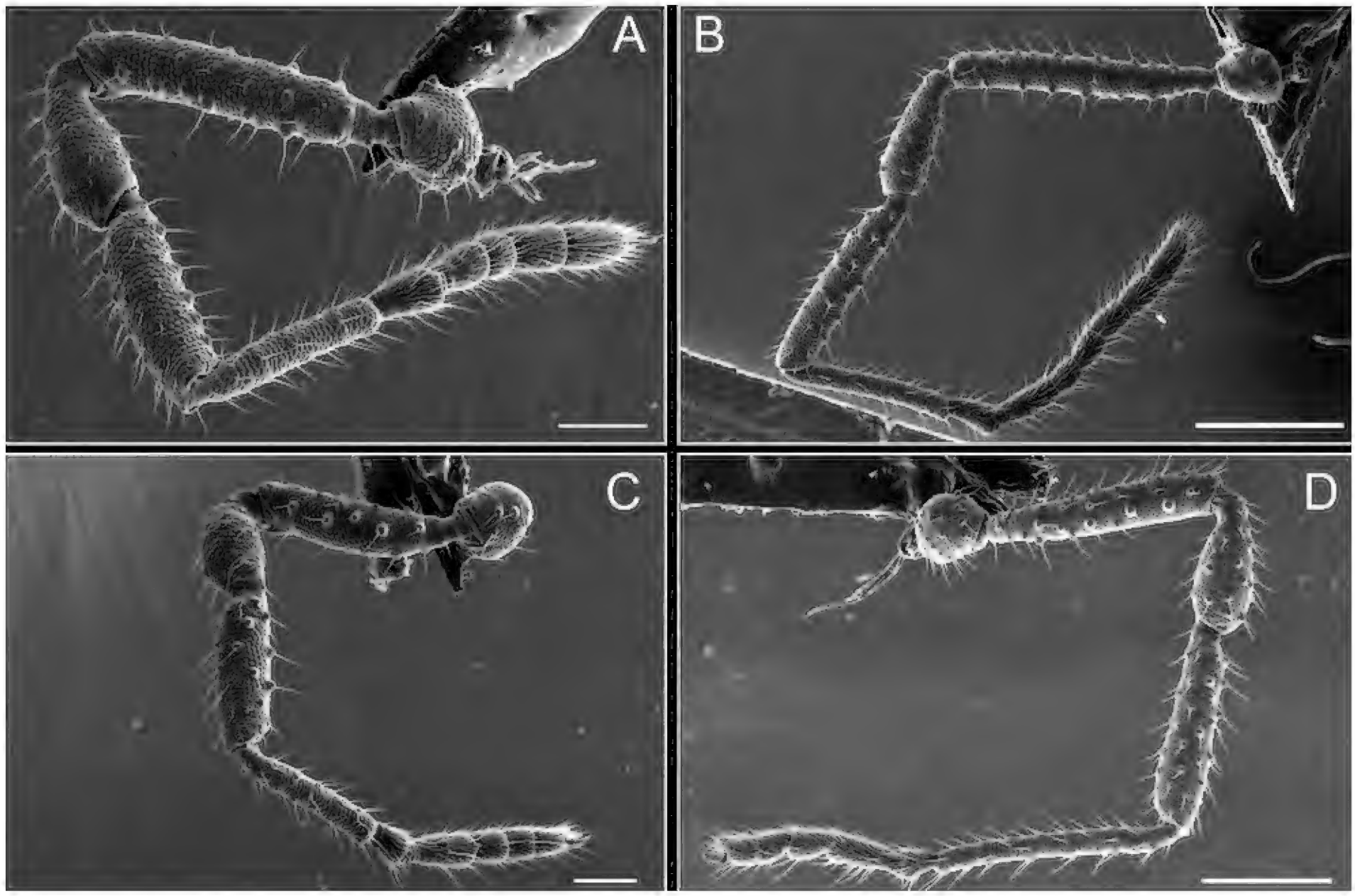

Figure 151. *Nerudiella wekufe* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

Legs (Fig. 151). Coxa I with 12 or 13 setiferous tubercles the two apical ones are stronger than the others, II with 25–30 setiferous tubercles, III with seven or eight tubercles, IV with five or six small tubercles. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III and < ⅓ of IV. Sternum arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 4–6–4–4.

Penis (Figs 152, 153). Pars distalis with a ventral plate that is divided into two halves by a fine cleft. Each half of the ventral plate with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface. Capsula externa remarkably long, covering the dorsal surface. It is further divided into two halves by a long cleft and possesses a pair of long processes that curve ventrally. Additionally, with a dorsolateral plate attached to the pars basalis. Capsula externa longer than the capsula interna. Capsula interna thin and laterally flattened, with a sharp apical area.

Female. Similar to male, with shorter pedipalpal femora.

Female measurements. Measurements: Total length 2.7, carapace length 1.1, dorsal scutum length 2.1, carapace max. width 1.5, mesotergum max. width 2.0. Appendage measurements: Pedipalps. Trochanter length 0.23, femora length 0.7, patella length 0.47, tibia length 0.58, tarsus length 0.66, leg I: trochanter (tr) 0.25, femora (fe) 0.82, patella (pa) 0.41, tibia (ti) 0.54, metatarsus (mt) 0.74, tarsus (ta) 0.57. II: tr 0.23, fe 1.0, pa 148, ti 0.78, mt 0.83, ta 1.1. III: tr 0.28, fe 0.74, pa 0.37, ti 0.57, mt 0.73, ta 0.65. IV: tr 0.30, fe 0.97, pa 0.54, ti 0.85, mt 1.1, ta 0.7. Tarsal count: 3–6–4–4.

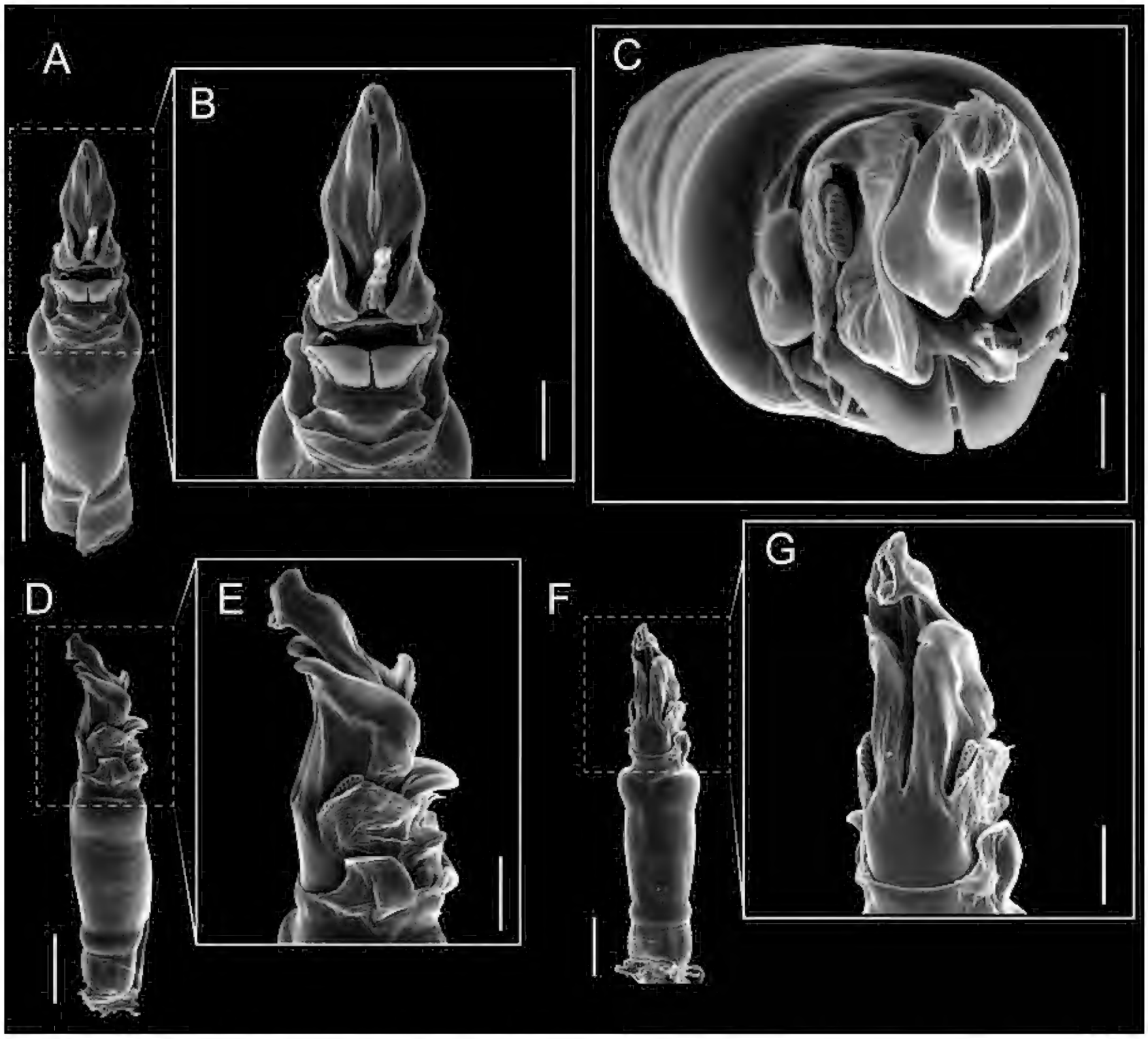

Figure 152. *Nerudiella wekufe* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 µm (**A, D, F**); 100 µm (**B, E, G**); 50 µm (**C**).

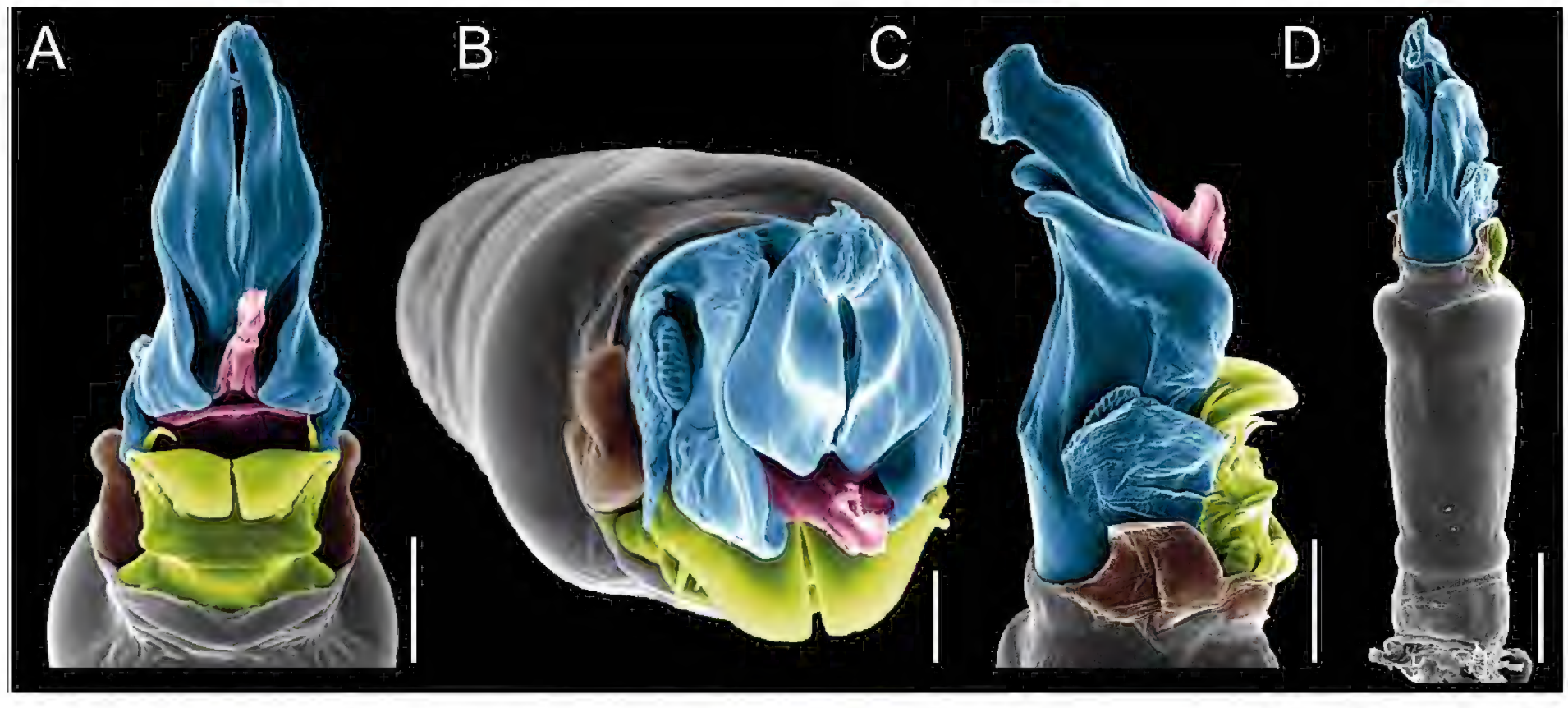

Figure 153. *Nerudiella wekufe* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 100 µm (**A, C**); 50 µm (**B**); 200 µm (**D**).

***Nerudiella zapallar* sp. nov.**

https://zoobank.org/DBDA77EA-D4D0-4AF3-BB05-9B3292CC24C7

Figs 154–159

Material examined. *Holotype*. ♂ **Chile.** Zapallar: E. Ross, A. Michelbacher coll. 27.XI.1950 (CAS).

Etymology. The specific epithet refers to the type locality of the species, the commune of Zapallar, located in the province of Petorca, Region of Valparaíso, Chile. Noun in apposition.

Diagnosis. This species can be distinguished from other species in the genus by a unique combination of features. The dorsal surface and pedipalps exhibit a dense population of setae. Additionally, the femoras and tibiae of the pedipalps are covered with small tubercles. In terms of male genitalia, it features a capsula externa that envelops the dorsal and lateral surfaces. A notable characteristic is the apical region of the capsula externa, which bends at a 90-degree angle in relation to the genitalia's axis. Moreover, two small parallel apical structures are also present. It is worth noting that this species shares some similarities with *Nerudiella choapa* sp. nov., especially in the apical region of the capsula externa. However, it is relatively larger in comparison.

Distribution. Chile: Valparaíso Region (Fig. 4F).

Description of male holotype. Measurements: Total length 2.39. Carapace length 0.94, Dorsal scutum length 1.88, Carapace max. width 1.2, Dorsal scutum max. width 1.8. Appendage measurements. Pedipalps. Trochanter length 0.26, femora length 0.82, patella length 0.43, tibia length 0.65, tarsus length 0.76. Leg I: trochanter (tr) 0.24, femora (fe) 0.85, patella (pa) 0.44, tibia (ti) 0.62, metatarsus (mt) 0.73, tarsus (ta) 0.55. II: tr 0.25, fe 1.27, pa 0.52, ti 0.85, mt 0.85, ta 0.95. III: tr 0.25, fe 0.72, pa 0.35, ti 0.64, mt 0.72, ta 0.57. IV: tr 0.24, fe 1.08, pa 0.52, ti 0.93, mt 1.09, ta 0.68.

Dorsum. (Fig. 154, 155). Eta (η) hourglass-shaped dorsal scutum. Ocularium low, rounded, with small tubercles. Dorsal scutum and free tergites microgranulate, mesotergal areas without clear separation but covered with small setiferous tubercles.

Chelicerae (Fig. 156A, B). Segment I with a sharp tubercle on the dorso-distal surface and three small proximal tubercles. Segment II bearing scattered setae in ectal and ventral views, with one triangular tubercle prominent from the others in front view.

Pedipalps (Fig. 156C, D). Trochanter with a small dorsal tubercle. Femora bearing the dorso-mesal area with setiferous spines, there are three proximal ones that are stronger than the others; in ventral view there are three strong proximal spines, and a row of small tubercles. Patella with a row of setiferous tubercles. Tibia with three ventral-ectal and two ventral-mesal spines, lateral and dorsal areas with small setiferous tubercles. Tarsus with three mesal and ectal spines with subdistal setae.

Legs (Fig. 157). Coxa I with 11–13 setiferous tubercles the two apical ones are stronger than the others, II with 25–30 setiferous tubercles, III with nine or ten tubercles, IV with six or seven small tubercles. Spiracles not obstructed by bridges. Smooth surface occupying ⅓ of leg II, ¾ of III, and < ⅓ of IV. Smooth area of leg II with two small tubercles with subdistal setae on each side. Ster-

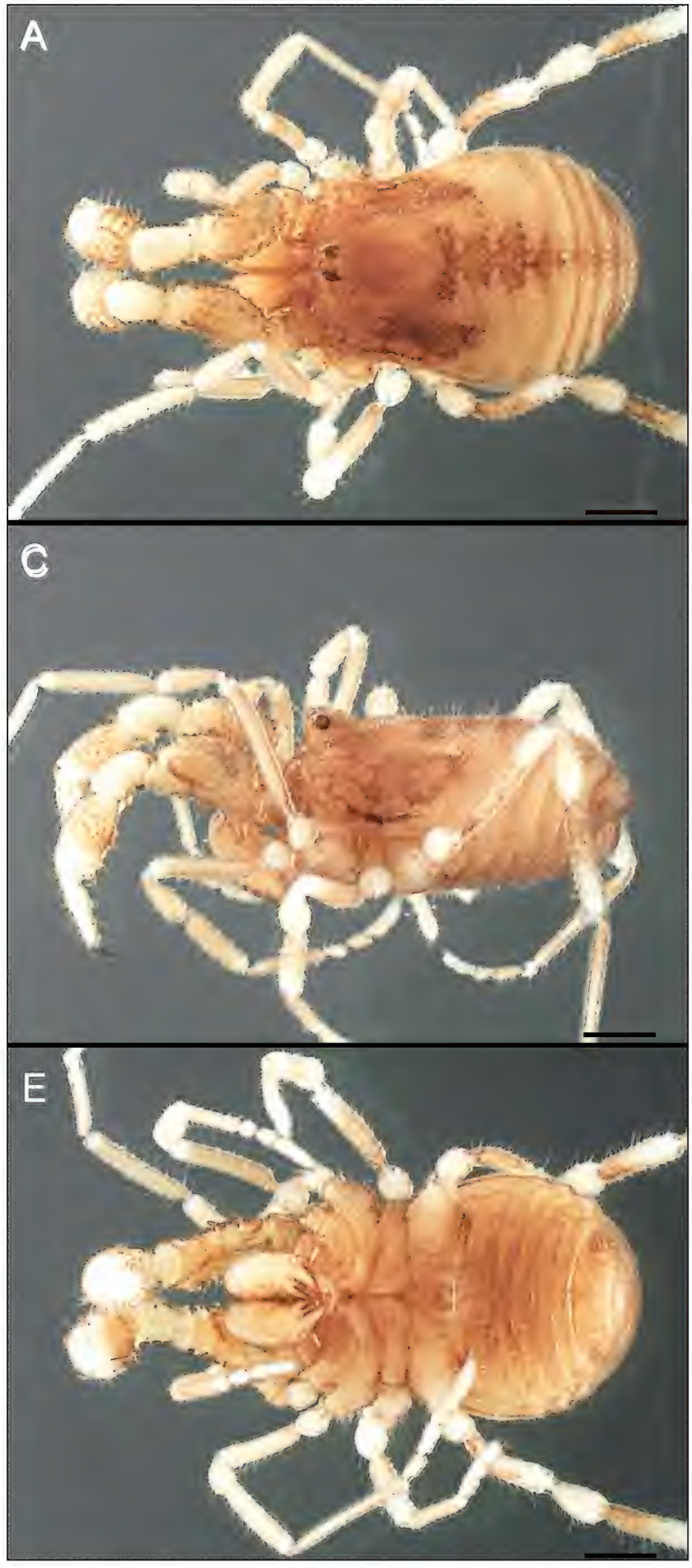

Figure 154. *Nerudiella zapallar* sp. nov. habitus, male **A** dorsal view **B** lateral view **C** ventral view. Scale bars: 1 mm.

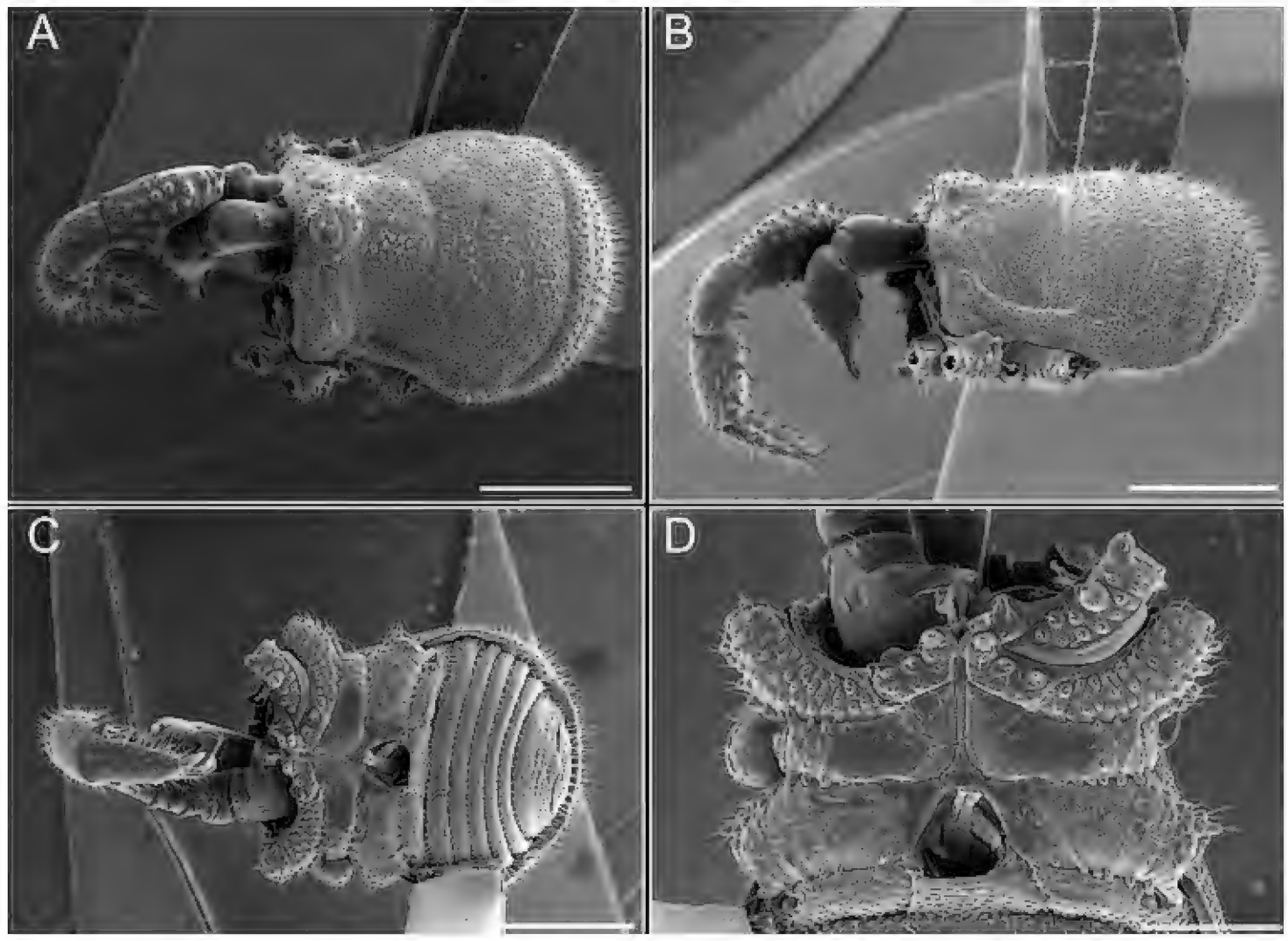

Figure 155. *Nerudiella zapallar* sp. nov. male, SEM images of habitus **A** dorsal view **B** lateral view **C, D** ventral view. Scale bars: 1 mm (**A, B, C**); 500 µm (**D**).

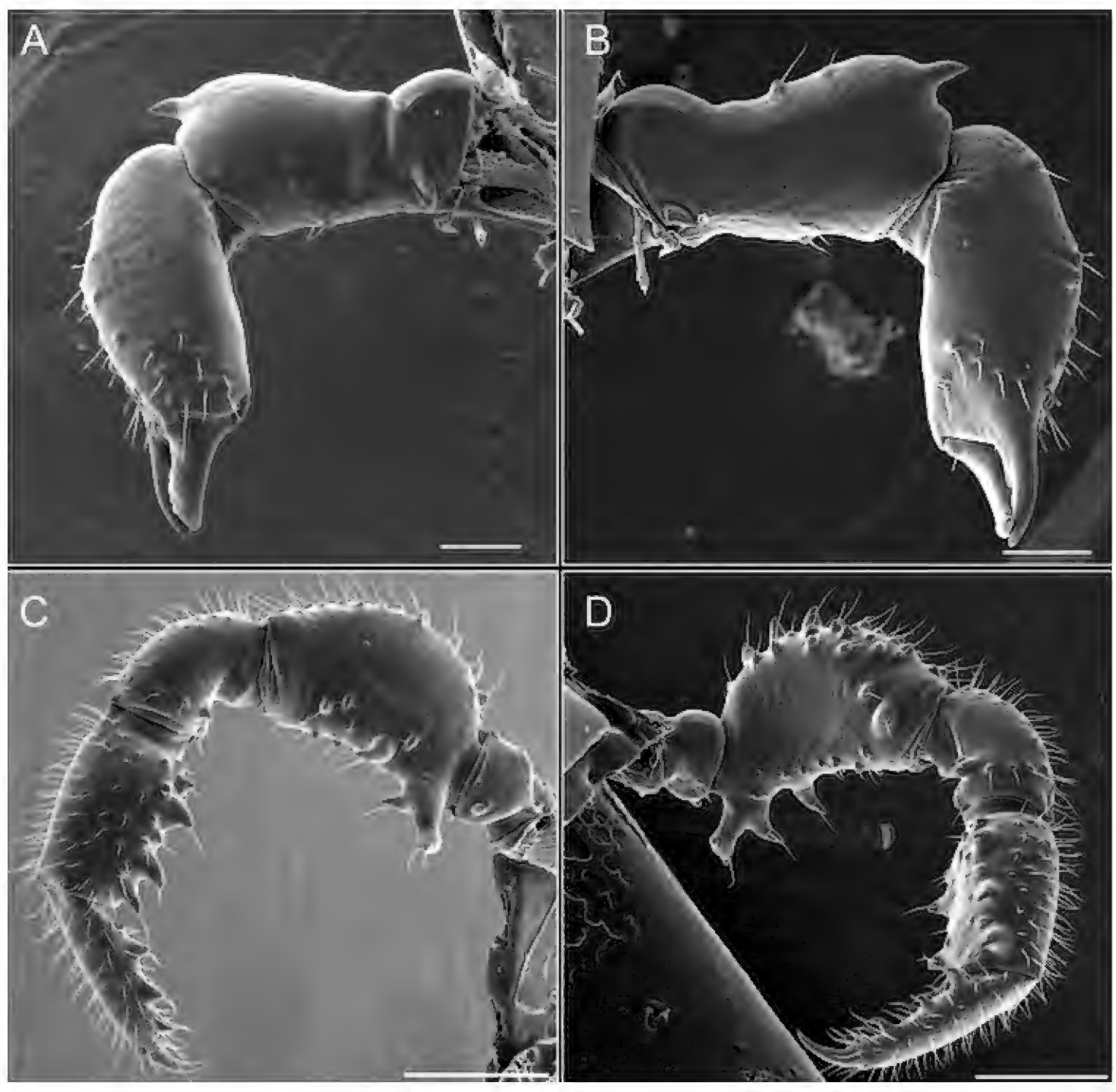

Figure 156. *Nerudiella zapallar* sp. nov. chelicerae: mesal **A** ectal **B** pedipalps: mesal **C** ectal **D**. Scale bars:200 µm.

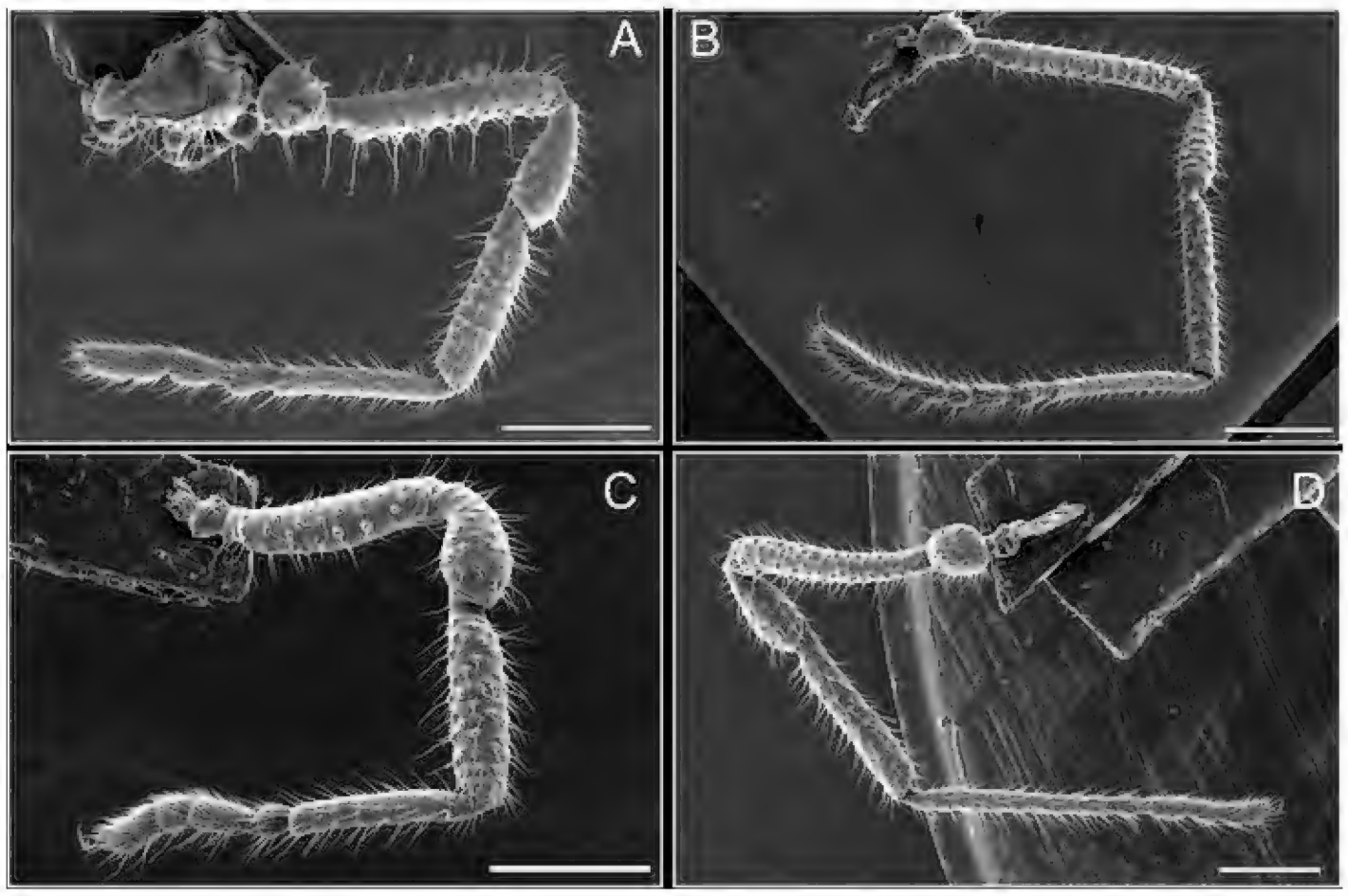

Figure 157. *Nerudiella zapallar* sp. nov. legs I **A** II **B** III **C** IV **D**. Scale bars: 200 μm (**A, C**); 500 μm (**B, D**).

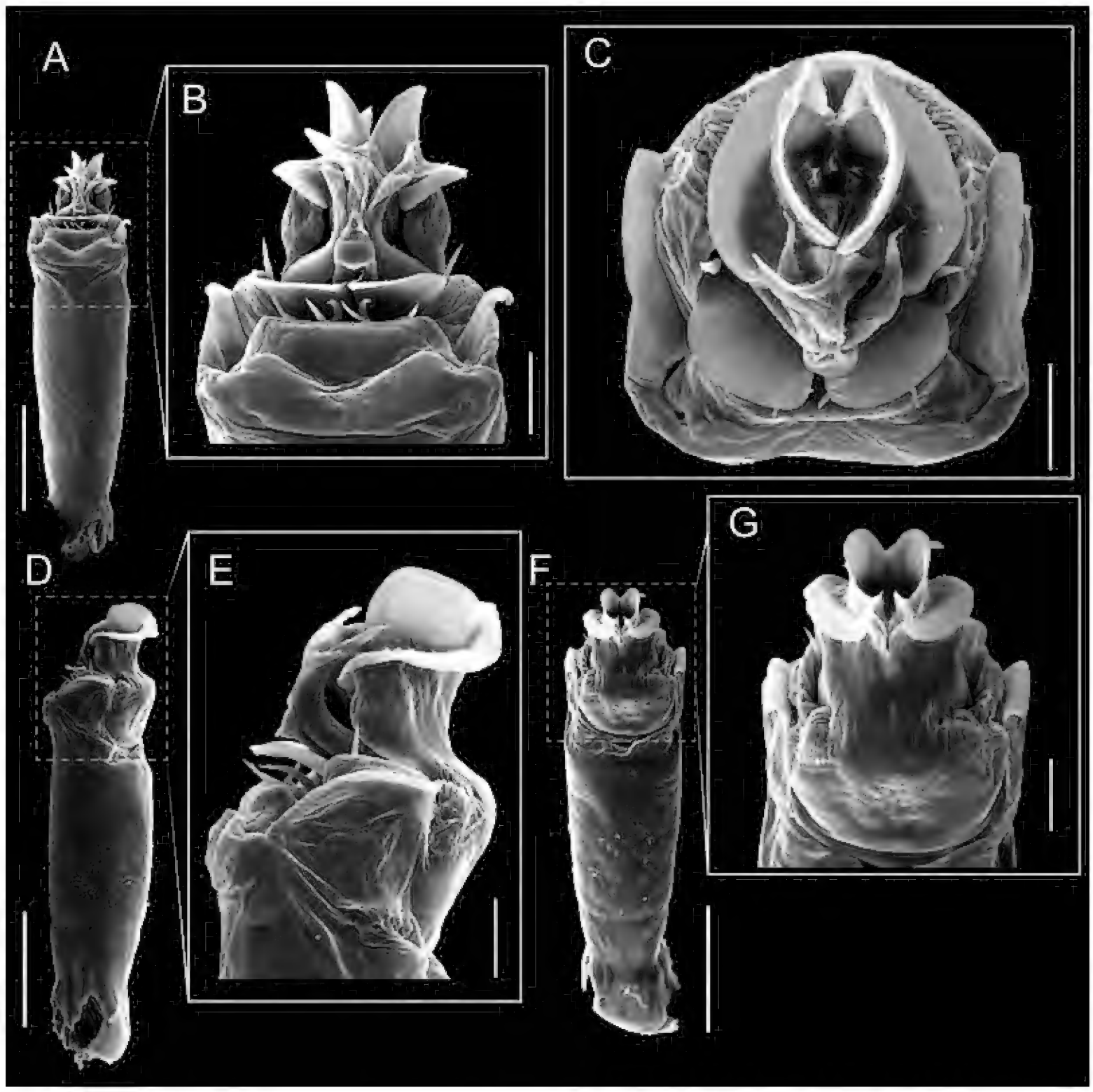

Figure 158. *Nerudiella zapallar* sp. nov. penis: ventral **A, B** apical **C** lateral **D, E** dorsal **F, G**. Scale bars: 200 μm (**A, D, F**); 50 μm (**B, C, E, G**).

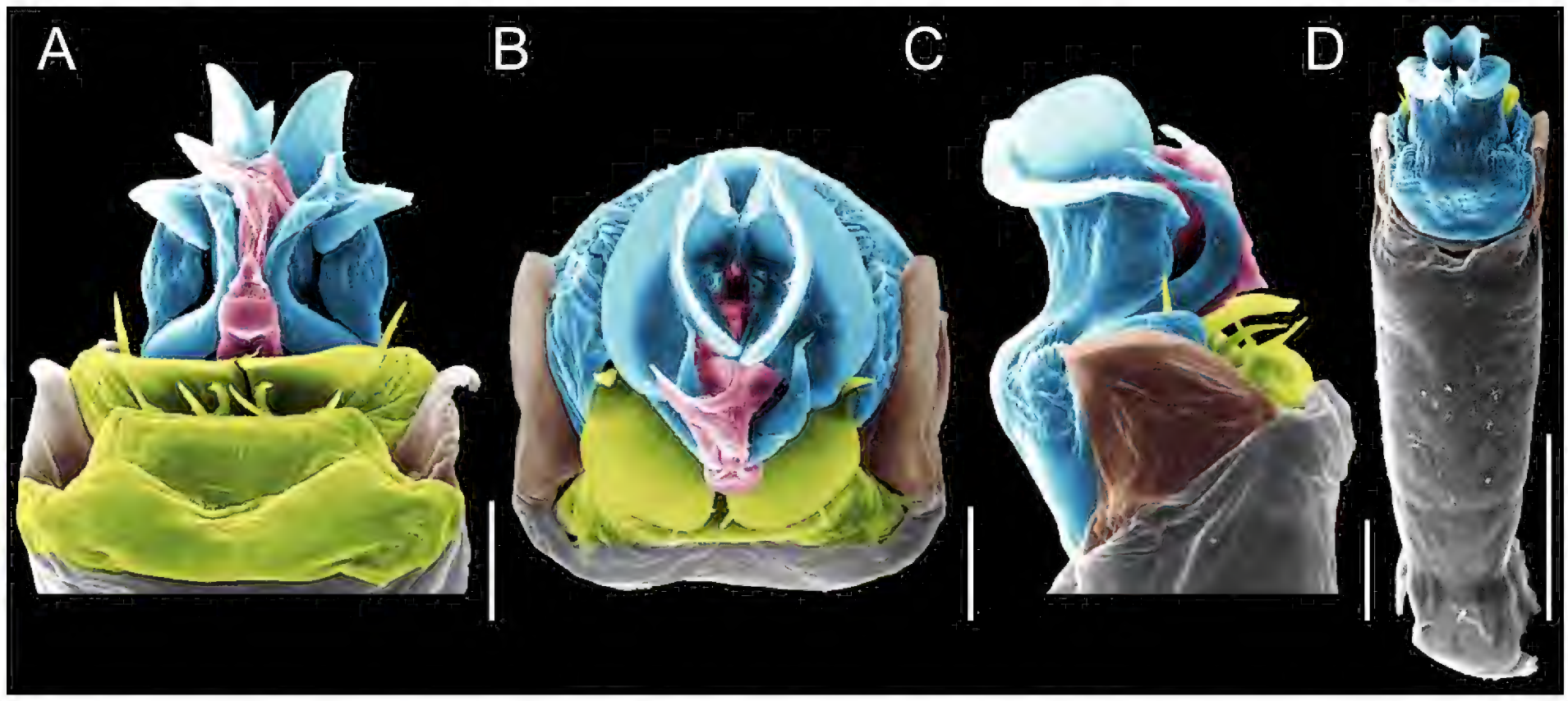

Figure 159. *Nerudiella zapallar* sp. nov. penis: ventral **A** apical **B** lateral **C** dorsal **D**. Colors: ventral plate (yellow), capsula externa (blue), capsula interna (red). Scale bars: 50 µm (**A–C**); 200 µm (**D**).

num arrow-shaped. Legs covered in small tubercles, astragalus longer than calcaneus on all legs. Tarsal count: 3–4/5–4–4.

Penis (Figs 158, 159). Pars distalis with a ventral plate bearing a fine cleft dividing the plate into two halves. Each half with three pointed macrosetae on the ventral surface and one macroseta on the dorsal surface; capsula externa covering the dorsal surface, with the apical part bent at an angle of 90 ° to the axis of the pars basalis of the genitalia, with a pair of long apical processes and a pair of long lateral processes; there is a dorsolateral plate attached to the pars basalis. Capsula externa taller than capsula interna. Capsula interna thin, with a sharp apical area.

Female. Unknown.

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

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Author contributions

WLP and APG contributed to study conception and design. All authors contributed to data collection, interpretation of results, drafting the manuscript and editing the manuscript. All authors reviewed the results and approved the final version of the manuscript.

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Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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Supplementary material 1

Collection information and GenBank accession numbers

Authors: Willians Porto, Shahan Derkarabetian, Gonzalo Giribet, Abel Pérez-González

Data type: docx

Explanation note: Collection information and GenBank accession numbers for specimens used in this study (focus group in red).

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Supplementary material 2

Complete IQ-TREE results

Authors: Willians Porto, Shahan Derkarabetian, Gonzalo Giribet, Abel Pérez-González

Data type: jpg

Explanation note: Results obtained from IQ-TREE, with the SH-aLRT and UFBoot supports indicated at the nodes. The red branches in the illustration represents South American species.

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Link: https://doi.org/10.3897/zookeys.1207.120068.suppl2